



UNIVERSITAT POLITÈCNICA DE CATALUNYA  
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Centre de la Imatge i la Tecnologia Multimèdia



# blank(null)

Una historia interactiva en HTML5  
TRABAJO DE FINAL DE GRADO

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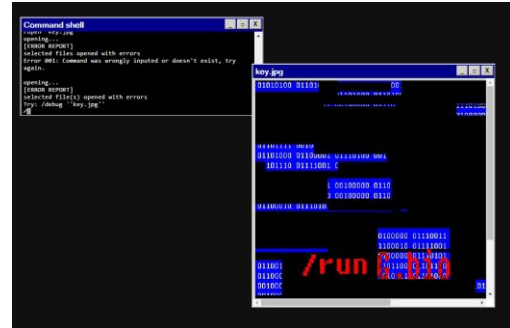
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## Resume

The project's name is "blank null", it's set to be an online interactive story / videogame in which the player helps a character.

The story starts with the player obtaining a link for a website called "the void of secrets" the player will obtain this link from social media, posters on the street or forums. Once he gets into the site, the site will ask him to "break security" a link is presented and an obvious hint giving the access credentials. When the player enters he will be prompted to a command shell that he will try to "decipher" how to use it by following the highlighted clues. Eventually and after some events he or she is presented to G, an artificial intelligence trapped in a folder, lacking

any kind of memory file as to who created her and what was her purpose. You are asked to take her with you to recover these memories while exploring the company's internal web, Nulwo is this company and in the process the reader will uncover secrets, face adversities, solve puzzles, hack terminals and find out about Nulwo's story and relationship with G.



Blank(null) is an interactive adventure meant to be enjoyed in multiple levels. By enjoying and caring about the realistic characters like G. By doing puzzles and solving problems by using logic and critical thinking. By enjoying the intricate and mysterious story that unfolds in front of the player, in which he or she have to help G to find out about her origin and in turn unveil the secrets from the Nulwo Company.

The project is made entirely in HTML5, JavaScript (Using the three.js library for 3d rendering), CSS3 with the aid of Photoshop for drawing and illustrating, 3DSMax for 3d modeling, Premiere and After Effects for video editing and post-production. And Fruit Loops Studio and Audacity for Audio and Music engineering.

## Keywords

Web, HTML5, Interactive, Adventure Game, Online game, Videogame, 90's, retro

## Link To The project and Demo Video

[Project](#) || [Demo Video \(Full Gameplay\)](#) || [Trailer \(1:00 video\)](#)

For the project you'll need to input username: **admin** and password: **059510**. Later you'll be asked to register, feel free to use a fictional email and password if you wish as it doesn't check or ask for a special code. Password for PC 2 is **25702** and for PC 3 is **24AA45**.

## Special Thanks

I'd like to thank my parents who showed a great support over the project, everyone of my friends who showed the same amount of interest and helped me test and give opinions over time. I'd like to thank every band and artist I heard during the progress of concepting and developing this work, no ideas come to me without music. Also to every artist that has given me any idea through this process. To my girlfriend who has been the most supportive person in the world and pushes me to create something unique and original every time.

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# Objectives

The objectives within this project are both to fulfill a personal desire of improvement and a desire to see and create a quality project in the span of this semester.

To a personal level, the objectives I wanna set for myself are those of ability improvement. The project will deal with different programming languages, such as javascript, jquery, ajax, php, html5 and others. It will also deal with the illustrative field, I will have to make and illustrate various images along the process of production and preproduction using a drawing tablet and illustration software like photoshop. I will also have to deal with the notions of Marketing and branding for my product as it's an important aspect of an interactive story on the internet, the fact that I will have to promote myself in the best way possible trying to appeal to a certain public using certain design and planning decisions. Writing and storytelling is also on the table, writing a story that feels believable, engaging and maybe even moving is another of the challenges I want to overcome. Game design and in general interface design is an important aspect I will have to have in account in every step of the way in this project.

All of these points mentioned above are the abilities I want to be able to outdo and improve for myself with this project.

To a project point of view, using these techniques and abilities in a way that results in a quality product at the end is my main objective above all with a fun to explore inside world, engaging character interactions with the player, a compelling and interesting story and fun puzzles to solve, all of this using the HTML and web technologies to my advantages to create this creative project.

The product or part of the product I want to launch out there must have a minimum level of personal quality standards it must achieve. Time constraints and problems will come out in the way, which I will do my best to overcome to turn in an interesting, entertaining and good overall project for the jury, for me and for anyone who wants to read and experience further the work.

The work will have a total of 2 chapters and 2 intermissions, the play duration of these should be around 45 minutes and an hour and a half depending on speed playing and the user's experience on games of this kind and how fast can he travel from point A to point B, having in consideration reading speed, clicking speed, easiness on puzzle solving, etc.



# State of Art

“Blank Null” is set to be an interactive adventure on web platform that almost anyone can experience in most of the web browsers, computers and Operative Systems. The project in itself has 5 main pillars, these pillars are the competences and areas on which the project is made:

- Web design
- Game Design
- Webcomics
- Interactive media
- Storytelling (computer science and 4th wall breaking)

**Web design** due to the fact that the project will be programmed as a “web site” and will have all of its interactive features made on a script based web language.

**Game Design** due to the fact that it has playable minigames, puzzles and parts where a game design sense must be used in order to design these sections.

**Webcomics**, it's the main inspiration for the project itself, visual novels readable through the internet and that some make use of the advantages html and web design has to offer.

**Interactive media** in general as the project itself fits into its categorization.

And **storytelling**, a main focus of this project is in the story, it pushes the user forward to keep playing and discover details about the characters, the environment in which the story takes place and to solve the mysteries that are put right in front of him. Also plot devices such as 4th wall breaking and using the 90's technological limitations as advantages to write the story and interaction are explained.

Some of these aspects will be fused during the explanation due to their tight connections in this ambit and situation.

## Web Design

### Web Technologies History

#### First browser and internet

Starting with the topic of web design, web design is the notion of designing usable, likable and engaging interfaces for web pages and web applications. Since its starts it's been somewhat of a vague term that has assented and took some better form in the last decade or so around when web 2.0 was introduced.

When the World Wide Web was created in 1989 and later its publishing in 1991, the only content the web was supporting in a visual way was plain text only information, .txt archives and other kind of files that independent interpreters were available to see. That changed in 1993 with the creation of the first web browser by the hand of Marc Andreessen and Eric Bina, called the "Mosaic browser", it was the first taste of the now standard hypertext web pages and web browsers.



Part of the evolution was thanks to the World Wide Web Consortium (W3C), created in 1990 by Sir Tim Berners-Lee. This Consortium oversees the web's continued development. Right now W3C plays an important place in internet and web history as it is the one that changes and keeps the standard evolving and changing. Most web browsers must adapt to the HTML standards that W3C define.

The evolution of the internet from the implementation of "Mosaic" has since been dictated by the evolution of HTML and PHP. Since their version 2.0 and 1.0 respectively, both PHP and HTML have evolved to the actual version 5 and 7 respectively.

## HTML



HTML was created as a “tag” based format for easily sharing documents, this was in 1980 and was called ENQUIRE, long before the creation of internet, its creator was physicist Tim Berners-Lee, a contractor at CERN. In 1989 Berners-Lee was proposing an hypertext based system for internet. Berners-Lee specified HTML and wrote the browser and server software in late 1990. Before all this, with Mosaic’s development, the browser was only able to access web services through HTTP in its more primitive version (0.9) conceived by the same Tim Berners-Lee. The browser was also able to access to Copher, FTP and Usenet News through NNTP.

The development of HTML and internet technologies had a heavy emphasis on an aesthetic level, along the process there was an emphasis to be able to tweak and customize websites and documents. This can be seen as HTML permitted the inclusion of 18 types of tags at the moment of its early conception, allowing for large bodies of text to be separated in categories and put around in different ways. It was defined as a markup language that web browsers could use to interpret and compose bodies of text, images, and other material into visual or audible web pages. In 1995 HTML arrived to its version 2.0 which was intended to be the first HTML specification intended to be treated as a standard against which future implementations should be based. Since 1996, the HTML specifications have been maintained, with input from commercial software vendors, by the World Wide Web Consortium (W3C).

## PHP

Around these years PHP starting developing by the hand of Rasmus Lerdorf which wrote several Common Gateway Interface (CGI) in C which he used to maintain his personal homepage. He extended them to work with web forms, communicate with databases (which is the main feature for PHP) and be able to be integrated with HTML, and called this implementation "Personal Home Page/Forms Interpreter" or PHP/FI. He then published his progress on the Usenet discussion group [comp.infosystems.www.authoring.cgi](mailto:comp.infosystems.www.authoring.cgi) on June 8, 1995.

In 1997 PHP transitioned from a single person development to a team development, there was a rework from Zeev Suraski and Andi Gutmans who rewrote the parser in

1997 and formed the base of PHP 3, a reformulated form of the basic PHP, later published in 1998.

Releases were done from version 3 to the actual 7.1 with significant changes and with the aim of giving new features and tools. In August 2014 it was given the first “stable release” for PHP, version 5.6, which addressed security issues. Then skipping version 6 to give version 7.0 in December 2016, the actual version, being revised for bug and security fixes.

## CSS

Then, definition of the looks and layout of the HTML content was later introduced in 1996 when CSS was implemented to the HTML protocol. In 1994 CSS was first proposed by Håkon Wium Lie which worked with Berners-Lee in CERN. Several other stylesheet languages for the web were proposed around the same time, and discussions on public mailing lists and inside World Wide Web Consortium resulted in the first W3C CSS Recommendation (CSS1) in 1996. Style sheets have existed in one form or another since the beginnings of Standard Generalized Markup Language (SGML) in the 1980s, and CSS was developed to provide style sheets for the web, so not as a novelty, CSS was created specifically for web HTML. CSS was in the early ages not able to be implemented as a separate document, it was “hard-coded” into the browser, this was before the official release of CSS, by 1996 W3C published CSS level 1.



Development of HTML, CSS, and the DOM had all been taking place in one group, the HTML Editorial Review Board (ERB); PHP, being an optional but very commonly used technology in the web, was being developed by its own team and not “officially” implemented in the W3C plans.

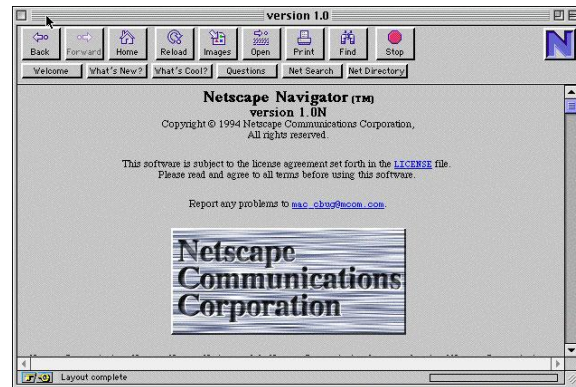
Browsers instead are the ones to be able to support PHP with the standard HTML, CSS and DOM. If any browsers at the time didn't have PHP support one had to "install it", the website owner had to configure his PHP execution depending on the browser.



Now most browsers have a common way to execute PHP natively.

## JAVASCRIPT

Javascript was implemented to the formula around 1994, a company called Mosaic Communications was founded in California and employed many of the original NCSA Mosaic authors to create Mosaic Netscape. Their goal was to create a killer to Mosaic Browser, a prototype which they code named "Mozilla", which would then become the so known web browser. Mozilla or "Mosaic Netscape". It was released in 1994 occupying around 75% of the browser market.



The company, now called Netscape communications (name changed due to risk of being sued by using the "Mosaic" name) realized that the Web needed to become more dynamic. Marc Andreessen, the founder of the company believed that HTML needed a "glue language" that was easy to use by Web designers and part-time programmers to assemble components such as images and plugins.

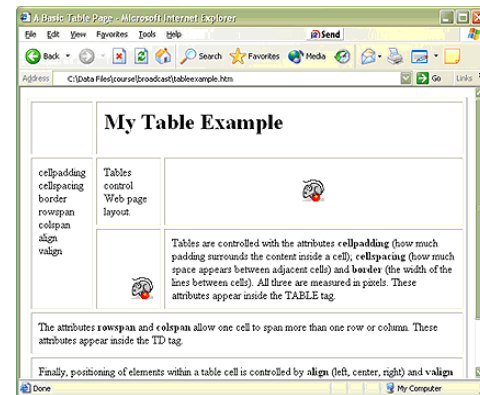
In 1995, the company recruited Brendan Eich with the goal of embedding the "Scheme" programming language into the Netscape Navigator. Before putting hands into work, the company contracted the services of Sun Microsystems to implement their Java language into the browser, from this collaboration, Netscape saw that the language to create had to work similarly to the Java syntax and not the "Scheme" they wanted Eich to implement initially. Eich wrote the first Javascript prototype in 10 days

in may of 1995. This then shipped with netscape Navigator 2.0 in September of the same year.

While all of this was happening, the open source and developer communities set to work to revolutionize what could be done with JavaScript. This community effort was sparked in 2005 when Jesse James Garrett released a white paper in which he coined the term Ajax, and described a set of technologies, of which JavaScript was the backbone, used to create web applications where data can be loaded in the background, avoiding the need for full page reloads and leading to more dynamic applications. This resulted in a renaissance period of JavaScript usage lead by open source libraries and the communities that formed around them, with libraries such as Prototype, jQuery, Dojo Toolkit, MooTools and others being released.

## Primitive design practices before 2005

In 1996, Microsoft released its first competitive browser, which was complete with its own features and tags. It was also the first browser to support style sheets, which at the time was seen as an obscure authoring technique. Prior to this designers had to use tables to structure in a more two dimensional way their webs, as HTML was originally designed to display tubular bodies of text. Designers used even blank .gif files to give spaces, set margins or state separations between contents.



This changed in 1996 when W3C introduced CSS to be part of the web standard to support presentation and layout. This allowed HTML code to be semantic rather than both semantic and presentational, and improved web accessibility for developers.

Flash was developed in the same year. It permitted the use of vectorial graphics, it became fairly popular and was another alternative to the use of javascript that was used for widgets and gifs for animated content and motion pictures. Flash grew in popularity over time and became more complex, using a language called "ActionScript", Flash in no time was able to play video files, create interactive applications, and it even was used to create entire websites entirely. The downside was that Flash needed a plug in for every browser, even to its last days of popularity in the web around 6 years ago no popular browser accepted Flash to run natively.

## The "Flash" era

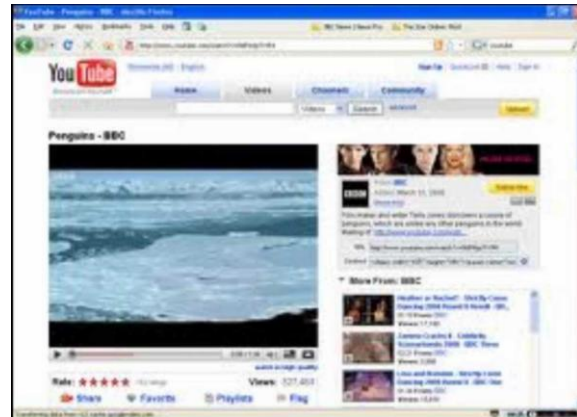
During the Flash era (2000 - 2011), sites like Newgrounds.com were very popular, hosting various Flash games, animations and in general entertainment before the coming of Youtube. In Newground lots of people gained a following and became well known game developers and animators that even today maintain that "internet fame". Newground spawned several other websites to "co-host" links to various games and gain money from ad revenue. In Spain and Spanish speaking countries, the site





“Minijuegos.com” became really popular between younger surfers of the internet. And in USA “Miniclip.com” became the reference place to find flash games. Children cable companies like Disney, Cartoon Network and Nickelodeon saw an opportunity and hired a whole team of game developers to launch flash games on their websites. These Flash games were easy to produce and consisted of endless minigames and addictive gameplay ideas starring popular cartoon characters. Flash games were one of the most popular things in the internet between 2000 and 2011 bringing enormous numbers of traffic through these sites.

Youtube also came to be around this “Flash era” in 2005, the website launched with its first Flash based video player, not something new, because lots of video players in the previous years achieved this. But Youtube took the concept and expanded it to a platform of video sharing and video streaming. Videos loaded really fast and the user interface engaged the viewer to watch video after video and discover new content. Videos were labeled with tags and Youtube’s algorithm showed related videos that would interest the user in thematic.



Talking about these sites is important, because it opened the gate from static web design to a more interactive user friendly internet. Where content was personalized, where creators could speak directly to others in chat forums about their creations, where people could gather to watch the latest game trailers or movie trailers and discuss them in the place. It changed the conception of a website, websites were looked like static pieces of information and pictures, with the implementation of flash, php and javascript, websites were able to do so much more, it was the first step for the actual internet era where people and internet are really connected and it's an important part of the daily life today this is known as the Web 2.0.

## Web 2.0

Companies eventually adapted to the new web. When the term Web 2.0 came to be in 1999 no one knew what it meant exactly, it became so much clear in 2006 with the coming of social webs. Web 2.0 meant the transition from an information only based internet to a more social one, to a company and business approachable point of view

of the web, where instead of views the term “cost per click” was a thing, going from a web where people was amazed that images were shared to an internet where you could watch videos and movies in your browser without having to download it, a web shaped by the internet speed technologies, where 56Kb modems died for ADSL 4MB/s speed of data transfer and eventually Optic fiber. Websites, now with these internet speeds, were able to go wild with functionalities and content size, by 2008 Youtube was able to stream HD video. A world where we transitioned from SMS to online chat clients. A web where social media, a never-seen concept came to be and was popularized, where content and experiences, photos videos and lives were shared with everyone for personal purposes to business opportunities and marketing.

The focus of the World Wide Web and its services went from a programmer approach to a more user friendly approach, surfing and using the web was something kind of technical back in the day. Developing a website was not easy either. It was the transition to Web 2.0 where the web took a more user centered approach, Web Design practices went better and a thought process on how to make websites accessible, easy to navigate and intuitive became a priority. Not long after books were written about usability and it started to become an assignment at universities and schools. The user experience became something important, simplify tasks and actions was primordial for users to stay on a site and take enjoyment out of it.

## Game Design and Video Games

The history of videogames is really long and elaborate, lots of advances were made since the first commercial computer program to be interactive back in 1950 when war simulations were built to train soldiers and tic tac toe was written as a computer program.

Perhaps the first game created solely for entertainment rather than to demonstrate the power of some technology, train personnel, or aid in research was Tennis for Two, designed by William Higinbotham and built by Robert Dvorak at the Brookhaven National Laboratory in 1958 [Image on the right Tennis for Two - Modern recreation].



Lots of advancements on videogames came to be in the next 30 years, mainly being the series of Atari consoles and games for Commodore and other personal computers. During this era the game design aspect

was driven by which system the game would be built for, porting one game to other systems was very rare and only successful arcade games were ported to home consoles or personal computers. One example is Pac-man, which started as an arcade cabinet in the late 70's during the "Golden Age" of video games, arcades were the place to go. 4 titles were ported to home consoles in this era, mainly Space Invaders, Frogger, Pac-Man and Donkey Kong, ports that even today people know about from this era.

On a game design aspect, most games in this era were top-down shooters like space invaders, games that focused on moving and collecting points from this same perspective or 2d side scrollers like Donkey Kong, tank battle shooters like Combat in the Atari 2600 [Image on the right], racing games like Night Driver in Atari systems and arcade and many more games that were not out of imaginative drive.



Games in those years experimented with many concepts that are staples in today's game genres.

But narrative driven games were experiences only seen in Personal computers with text-based adventures.

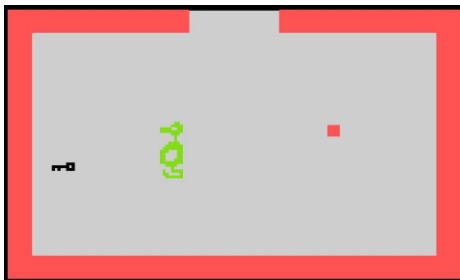
## Adventure games in the 70's.

In the 70's through the 90's a genre of videogames was popular in the personal computers of the time. The text-based adventures, having inspiration from games like Dungeons and Dragons, these programs were narrative driven Role-playing-games that you could play by yourself.

It's the main focus of this section due to the inspiration and similarities my project has with this genre.

TBA (Text based adventures) had their own storyline and immersed the user in a first-person type game where they had an inventory and a set objective to go in a world they could explore, this kind of experience was not present in home console games at the time, due to the fact that console games were thought as easy, simple and engaging experiences that could appeal to a

wider audience, also, design of the consoles themselves weren't able to make more inputs than direction and 3 buttons, there were mostly no access to text-based input. On the other hand TBA were complicated games with an inner leveling mechanism, where the player had stats like strength, dexterity, speed, defense, etc. They could equip various weapons and interact with them in the world in many ways. From a game design point of view, a TBA was more different and complex to make than a console game, also the experience was a longer one in those years, TBA stories could last for many more hours until the end of the game where console games normally were a game concept designed to run as long as possible until the player died, setting a score as a result, in TBA there were normally no scores, only the desire to finish the story and the adventure.



Eventually this design philosophy was implemented in console games, "ADVENTURE" was the first game to have a similar concept to a TBA. Published in 1979-1980, Adventure was a revolutionary concept for the home console market, it was one of the first games to include somewhat of a more complex storyline and a defined goal and subgoals for the player to achieve.

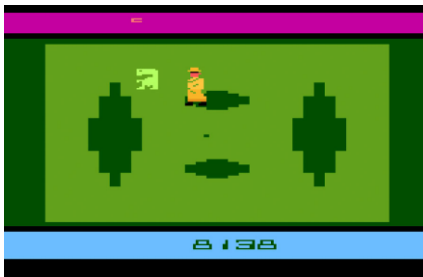
As the book "Atari 1980" described it:

*"In Adventure, the player's goal is to recover the Enchanted Chalice that an evil magician has stolen and hidden in the kingdom and return it to the Golden Castle. The kingdom includes two other castles (White and Black) and various obstacles and mazes within them. Further, the kingdom is guarded by three dragons: Yorgle (yellow dragon), Grundle (green dragon), and Rhindle (red dragon who moves much faster than the other two), that protect various items in the game and will try to chase and eat the player's avatar."*

Everything went nice for American consoles until its big crash in 1983. The industry experienced a severe downturn. This crash bankrupted several companies that produced North American consoles and games from late 1983 to early 1984. It ended what is considered to be the second



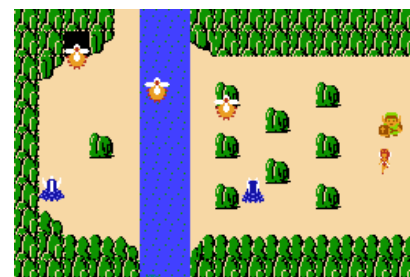
generation of console video gaming. [An Atari 2600 on the right.]



Reasons for this crash were the poor management of the American industry at the time that permitted the approval of bad quality games that lacked in the game design department and were boring and full of bugs and errors, this, summed up with the emerging of home computers as a new and more advanced gaming platform, made of the Atari saga of consoles a commercial failure, making them obsolete really quickly. [ET for the Atari 2600, on the left, is considered to be one of the main reason for the crash of american videogame industry in 1983.]

Various events came to be thanks to the decline of the american videogame market, the most important one was the rise of the Japanese market, with companies like Nintendo and Sega gaining world-wide popularity and creating consoles for the third generation of consoles, with the Nintendo Entertainment System outselling almost twice of what Atari 2600 made, occupying the place the American Market was leaving.

Story driven games in consoles evolved a little bit more with a more open structure and a graphical overhaul in the 80's. With the release of the NES in 1983, 8-bit gaming came to be. Games now could be more complex, spawning new genres like 2d-sidescrolling platformers, which was the king genre





until the 90's. Adventure games in the console also made a step up with the first open-world open-ended game, The Legend Of Zelda. It revolutionized the Adventure genre with fresh ideas, an open world to explore, an open ended structure where you could tackle the game in any way you wanted, the story progress was not linear, lots of secrets were hidden and it was so popular that players were discussing secrets and tips with friends to advance further in the game. Having a similar premise as Adventure for the Atari 2600, Zelda made the adventure genre more graphically friendly and appealing, with awesome music, graphics, game mechanics, items and memorable challenges.

Apart from Zelda we saw the rise and spawn of the RPG adventure genre in Japan. Dragon Quest is the one that defined this new vertient on the RPG world. Taking the classical RPG formula but combining it with an open world full of quests, adventures and many paths to follow, likable characters and enemies and popularizing the scene. From Dragon Quest the so well known series, Final Fantasy was born, taking a more serious approach to the formula that DQ had set but with little and charming twists. Both games were prominent on the turn based strategy battles, the item managing aspect of the gameplay and the epic adventures set in a huge explorable world full of many items to equip and try, different classes and playstyles, and in general the most ambitious RPG titles of that era. Taking inspiration from the desire of polishing and making more real and visible what text based adventures had set to be.



Going back to personal computer adventures, until the end of the 80's TBAs were the only genre for adventure games. One of the most successful text-based adventures and that was regarded as the most visually engaging was King's Quest [To the left]. It was a TBA but with a moving character and graphically interactive environment instead of still images like most of TBAs in these years. TBA got stuck in its basic interface even though technology advanced, the new Commodore 64 was the best gaming computer in the 80's, having ports from popular console games.

The TBA genre still had a cult following but it was a declining genre that already reached its peak. The reason for this was the jump in graphics for video games, and the cult following for TBA games went to the new graphic and click based adventure games for the new systems. The updated hardware was now able to render graphics in 16-bits and 32-bits and had the addition of the Mouse, which permitted the user to click elements in the screen. Adventure games made a rework and focused on exploiting this to do more engaging and exciting game mechanics.

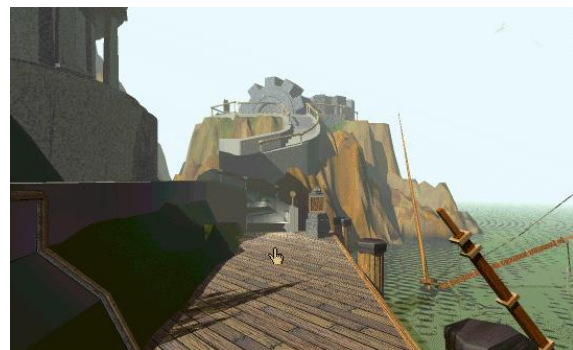
## The new adventure games of the 80's.

Games from now on would be more “click” centered, games like Monkey Island took the spotlight in the early 90's for its clever use of humor, likable characters and intricate and imaginative puzzles. Game design in this era was more about who would come up with the better puzzles and the better story. The industry shifted from the medieval themed storylines of the text-based adventures to a wider range of story, settings and ideas that played well with the growing era of information of the 90's.



Games in this era became even more complicated and intricate, the jump in graphics and technology permitted developers to go wild with ideas and have more creative freedom, a game called “Myst” changed the conception of adventure games forever.

Myst was THE adventure game in 1993. Being made in an era where games were for an adolescent and children audience. It released for Mac OS and changed the world of computer gaming. Made by two brothers lovers of world building and fantasy stories, the game pioneered on the exploring aspect of game design, the sensation of mystery and the drive to discover more about the story and the island kept the players going. The player was dropped on a mysterious island they were able to explore almost fully. The story dealt with difficult and moral choices that affected the plot and the way the player looked at himself and the impact he made on the story. Graphics pre-rendered in 3D were a novelty for the times, it was one of the first (if not the first) interactive pieces of software to include Quickplay video, which worked great for immersion and to suspend the player in the world. Myst is



considered to be the "killer app" that drove mainstream adoption of CD-ROM drives, as the game was one of the first to be distributed solely on CD-ROM, forgoing the option of floppy disks. The game received critical acclaim and people bought Apple computers just to play the game every friend of theirs was talking about, the story was praised by its mature tone and use of a branch story structure and arbitrary exploring of the world. Myst ended up becoming the most well sold game of all time until The Sims took that title on 2002.

Other games like I have "I have no mouth and I must scream" made a gigantic jump in what adventure games could do and what topics they could speak about, being adapted from the book of the same name, the game focused on a sci-fi post-apocalyptic plot where every character was being tortured, some of these characters were being controlled by the player in a series of "escape the room" kind of puzzles, the story was driven by human struggle and dealt with moral and ethical choices mostly like Myst, but with a much darker tone, characters were relatable, puzzles were complicated enough for a more challenging experience and the game was a departure from what was made before. This is the moment where adventure games, like my project, start to have a decline. The success of First person Shooting games like Half-Life and Doom and the high quantity of Myst clones in these years turned the gaming tendencies into a more gun-driven approach, and made the adventure genre a weak investment for companies.



The last successful adventure game in these years was Grim Fandango, made by Lucas Arts in 1999. Grim Fandango was a point and click adventure game that put the icing on the cake on what a good and entertaining adventure story for a videogame could be. Dealing with a grim subject (death) with an unparalleled sense of humor so typical of Lucas Arts, Grim Fandango delivered interesting characters, a cartoony world full of details, a gaming experience with many fun and interesting puzzles and riddles, with a charming art style glowing with lots of personality and originality, saying goodbye to an era of point and click games with a game that had stellar reviews, creating a cult following and an important mark on video game history, but nonetheless, receiving poor sales.





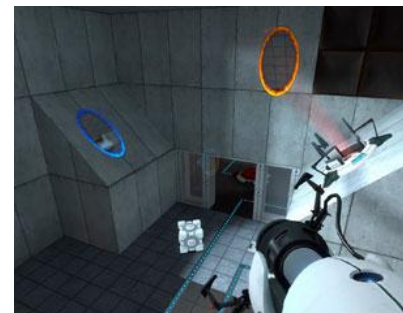
## The Renaissance of adventure games, Indie scene & the present

Adventure games kept quite and merged with other genres in the following years. It was in 2008 where a the boom for indie games came to be. Indie games were made by developers who wanted to see their favorite games made a reality. So they took inspiration and ideas from classical games and tweaked them and improved further on their mechanics and features. What we got from here were incredible games made by passionate people that had a good quality. Games like Minecraft and



Terraria use the open world formula and building mechanics to deliver a personalized experience for every gamer in a sandbox environment. Others like The Last Door (Made by The Game Kitchen a Spanish indie game company), Spooky's House of Jumpscares, SCP containment breach and Fran Bow to name some popular indie titles. Market on these games and in general the indie scene for adventure games has shifted to a more Horror and gruesome oriented type of gaming.

In the Triple A industry, games like The Walking Dead made a monumental change on adventure games. The game was a decision making game, events in the story or relationships changed depending on this, you could get various endings and in general it was an adventure game with an interactive element. Life is Strange was another popular game in these 7th generation of consoles, another "make your story" game where decisions taken conducted to several others and to different endings. More games like these are Heavy Rain, Beyond Two Souls and in general any game made by Quantic Dream has this decision making formula that is so popular in these days. These games helps us see how the definition of an adventure game has changed and what is popular right now. Also classic adventure and RPG games such as The Elder Scrolls and Fallout were acquired by Bethesda and reworked for new installments like Skyrim and Fallout 3, New Vegas and 4. These games take some elements from classical adventure games and brought them to a more mainstream experience. Puzzle games like Portal and its sequel took the cake on what a puzzle game should be like, innovating on the technical department with its portal mechanic and wonderful, funny and sarcastic sense of humor and ambience.



More on this era were DS games from 2005 onward. Games like Ace Attorney and 999 consisted in the Visual Novel genre and interaction puzzles, they made a change on how point and click games were perceived by new generations. For example 999 took things from escape the room games and made it its main focus, interconnected puzzles that help you find answers and advance in the story, while Ace Attorney combined visual novel characteristics and puzzle-solving with logical outcomes in a crime investigation setting for its story.

Right now the adventure game genre it's in a good place. We can see the evolution from text based adventures, through point and click and escape the room puzzle oriented games to an era where consumers crave more of that classic material from indie developers and other people want more narrative oriented games where decision making is the focus for the experience. We also have adventure games like Skyrim, Minecraft and Fallout where open world, free choices and item collection are the focus.



## Webcomics

### Early Webcomics

In comparison to videogames, the world of webcomics is not so popular or well known, web comics for the most part are what comics are, only that its publishing is in digital format, that's at least what most experts will tell you, from my point of view and from what I've researched online, webcomics nowadays have taken advantages from the web medium to break the simple panel by panel convention of what comics should be. I chose to speak about webcomics because of the inspiration some of them had on my work, which will be mentioned at the end of this section.

But let's start with the story. When internet came to be and image sharing and posting started to become a thing, comic creators saw an opportunity to publish their work in many different ways using the necessary tools. The first known webcomic was named T.H.E. Fox, created in 1986 and drawn using the Commodore 64's KoalaPad to draw in pixel art style. During the 90's as the internet grew, many new original webcomics came to existence. Jax & Co., NetBoy, and Argon Zark! Were some of these, experimenting with forms possible only on the Internet, uploading strips in shapes and sizes impossible in print.



Mike Wean's Jax & Co. introduced a "page turning" interface that encourages readers to read the panels in order; a concept that was quickly recreated by other webcomic artists.

In the 2000's it's when its popularity grew largely along with the publication of the first known webcomic themed book, Reinventing Comics, by Scott McCloud. A book in which he argued that the future of comics was on the Internet. He stated that the internet allowed comics to make use of the various advantages of digital media, establishing the idea of infinite canvas.

In 1996 the first webcomic sharing website, BigPanda was founded, hosting more than 700 webcomics, comics like SluggyFreelance was in this site and it's still a running daily comic in its own website. But this was short lived, as BigPanda didn't have enough traffic, it was shutdown in 2000. Chris Crosby, creator of Superiority on bigPanda at the time approached the creators of the site to make a new hosting site, creating Keenspot, which still runs to this days with frequent updates on the world of popular webcomics. In 2002 more websites were made to host webcomics, like

Modern Tales (Which was subscription based instead of ad based), Girlamatic and Webcomics nation.

Webcomics has had a wide audience of gamers, so naturally most of these are video game themed comics, which are the most read and most successful in the whole scene. Penny Arcade may be the most successful of them all and the one with more story. Releasing its first panel in 1998, it took a little space in the webcomic world to give gamers some talent from its creators Jerry Holkins and Mike Krahulik, being the most popular, lucrative and influential piece of art the gaming community has had since the creation of the internet. This webcomic is still up and running now in 2007 and other popular video game webcomics spawned from this trend, namely VG Cats, one of the most viral webcomics of the late 2000's early 10's, and Ctrl+Alt+Del, a more story centered videogame comic about gamers and their lives.

## Today

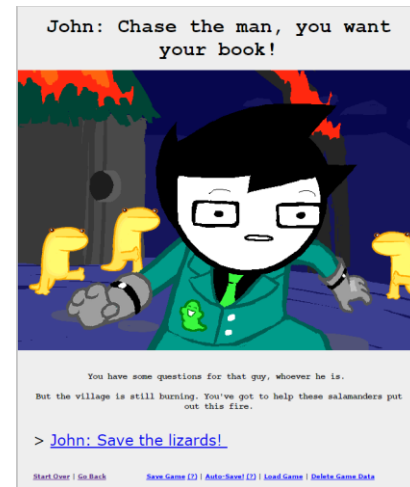
In the modern era of webcomics from the recent economic crisis in 2008 to this year, webcomics have been struggling and moving past the "vignette" format they were in, companies like Topatoco that focused on selling webcomic merchandise, was seen shifting their gears and hiring game developers, podcasters and internet personalities. People that created webcomics went to do more interactive storytelling methods like video games and visual novels in a market where Steam, the most well known PC publisher in the recent years, help distribute this kind of experiences and offers its platform to almost anyone interested in marketing their creations without cons. Still, many people still stayed in the web format, such as Homestuck, the most viral webcomic in the recent years, which instead of using vignettes, it borrows elements from text based adventure games with its command interface.



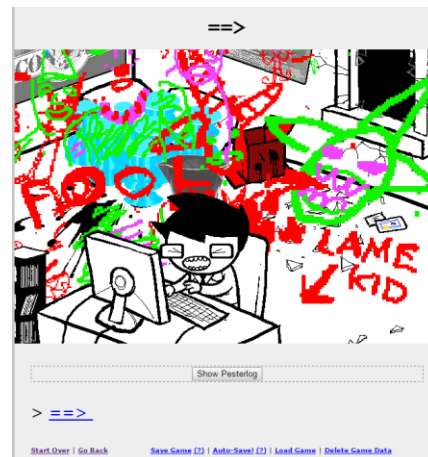
## Homestuck

Created in April 13th, 2009 by Andrew Hussie, Homestuck is my main inspiration for this project, mainly because for what techniques it used to break these webcomic

conventions. First it used Flash animations for [some of the pages](#), creating a story with an audiovisual and multimedia aspect to it, with mini games, visual novel segments, animated shorts and more, it also had the help of friends to make some original and video-game inspired music pieces to [play along the animations](#) and some segments, delivering really powerful and important moments to the story. Pages are turned with computer commands that, for some time, readers could input in the forums, where the creator Andrew Hussie picked one of the many and followed the story along with it. Eventually the story shifted to a more linear focus and stopped taking command suggestions from fans. Some panels are animated in gif format and the visual style is very reminiscent of low resolution, pixel-like videogames in the early 90's following a more cohesive modern art style, its length is also something worth noting, over 9000 pages and 200 characters, Homestuck has been compared to "Ulysses" by its length and dimension, with an overly complicated story that spans several infinite timelines, various character iterations, a great number of secondary characters, multiple arcs, character storylines, relationships, universes and lore for each one of them, etc.



Eventually the comic became so popular, the creator wanted to expand on the concept, he opened a Kickstarter page for a Videogame inspired in Homestuck, the project received overwhelming support rising 2.000.000 dollars over the 700.000 dollar goal it was set out to be, becoming the most successful webcomic related project in Kickstarter in history. The game is due to release this year as a point and click adventure, returning to the basis of what the comic took as inspiration.



After 7 years in the making and 3 big hiatuses, Homestuck ended on April 13th 2016 with its biggest panels yet, a 9 minute animation made by its now company "What Pumpkin" and a 3 minute hand drawn animation. Still having a prologue to be released any time in the future, Homestuck moved lots of people and gained a wide cult following.



## Ava's Demon

Another really well known web comic that plays with the HTML format is Ava's Demon made by Michelle Czajkowski, former Pixar and Dreamworks employee. First by having a gorgeous art style, it was well praised in the art community of tumblr and gained a following. At the end of Chapter one, the webcomic artist, displayed her abilities with Catau animation and After effects releasing the end of [Chapter 1](#), a charming video animation that brought in even more people. The comic not only displays animation techniques, also the will to play with the HTML medium [by modifying background and content](#). Michelle C. has stated that herself is a homestuck fan in her blog.



As we could see, many people in the webcomic industry is making their webcomics more interactive and fresh by using to full extent the HTML5 and javascript technologies, others keep using panels and vignettes, while other have moved to video games and programs to make their stories.

## Interactive advertising and ARGs

Interactive media and web advertising has gone far from the simple banners in web pages. With the evolution of web technologies and viral marketing, companies and creators have found interesting ways to promote their products in an engaging and participative way. By gathering people and therefore potential clients, this kind of advertising takes interactivity and blurs the line between reality and fiction. As an example, Atrapalo made one of these campaigns, the Atrapantes, a campaign consisting on different ads on websites, where little creatures were collected from website to website without a notice of their use or functionality, weeks later, the campaign revealed that every Atrapante had prizes inside, the campaign was a success and is one of the most well known cases of ARG advertising here in Spain. We use this as an example due to the interaction of a



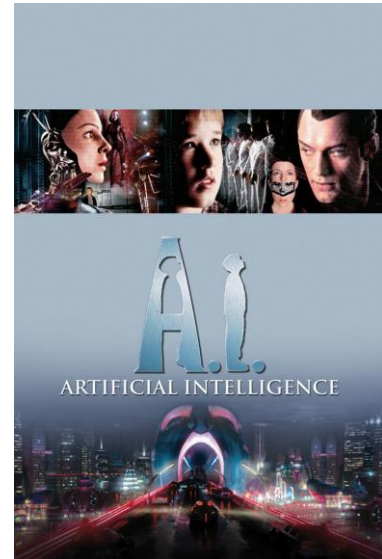
fictional element in the web or computer interacting in the real world and in people's lives. This is the basis of ARGs, interaction of fictional elements with the real world.

In the history of ARGs, the first most prominent example was the Film "The Blair Witch's Project", the movie in itself was a display of the potential of ARGs, the world of the movie, the witch's story and the myths that were created for the movie were set to be "in the real world" and it was marketed as found footage from some students in America investigating and doing a documentary for the Myth of Blair's Witch in a little town in the middle of the United States.



This element of ARGs is important as there must be an effort to convince the audience that the world inside the work is in the real world and it's a true story. The marketing for the movie consisted in posting and sharing in forums and the official website newspaper cuts of the events previous to the movie, the disappearance of many kids in a rural town in USA, said to be kidnapped by a witch, these kids were said to be eaten or experimented with in dark magic rituals. This helped to get the audience ready and spooked to watch the movie, it made it famous and talked upon in the internet. It also helped the foundation of the "Found Footage" genre, which became really popular in the following years, with the most prominent and modern example being 2009's independent web series "Marble Hornets", popularizing the internet's mythical creature "The Slenderman" a well known creature in the "creepy pasta" horror communities. The series was about 4 video students recording footage for an independent film, when reviewing said footage they find that a creature is in the background while recording, this creature ultimately ends up haunting them and controlling their destinies, the characters lived in the real world and Tim, who documented every event in his youtube channel, had a twitter account where he spoke with fans about his documentation, the twitter and youtube channel sometimes ended up getting hacked by another character, Masky, which apparently wanted to stop Tim from going further and had his own channel with videos and cryptic messages that the people could decode to get a clue on what Masky's next move could be. The series became the foundation for many other web series featuring the iconic creature and in general influenced the "Creepy pasta" community's growth. The series has since ended and received good reviews and fan acclaim.

Following the history of ARGs and interactive advertising, in 2001, in order to market the movie A.I.: Artificial Intelligence directed by Steven Spielberg and based on Stanley Kubrick's unfinished project, but also a planned series of Microsoft computer games based on the film, Microsoft's Creative Director Jordan Weisman and another Microsoft game designer, Elan Lee, conceived of an elaborate murder mystery played out across hundreds of websites, email messages, faxes, fake ads, and voicemail messages. They hired Sean Stewart, an award-winning science fiction/fantasy author, to write the story and Pete Fenlon, an experienced adventure game "world builder," to serve as developer and content lead. The game was a runaway success that involved over three million active participants from all over the world during its run and would become the seminal example of the nascent ARG genre.



After the success of the first major entries in the nascent ARG genre, a number of large corporations looked to ARGs to promote their products. To create buzz for the launch of the Xbox game Halo 2, Microsoft hired the team that had created the Beast. The result, I Love Bees, departed radically from the website-hunting and puzzle-solving that had been the focus of the Beast. I Love Bees wove together an interactive narrative set in 2004, and a War of the Worlds-style radio drama set in the future, the latter of which was broken into 30-60 second segments and broadcast over ringing payphones worldwide. The game pushed players outdoors to answer phones, create and submit content, and recruit others, and received as much or more mainstream notice than its predecessor, finding its way onto television during a presidential debate, and becoming one of the New York Times' catchphrases of 2004.



Various ARGs were made the following years taking on inspiration from The beast and I love bees, the series LOST had its own ARG which became a success, it introduced fans to backstory on the organization behind the happenings on the island by the hand of a reporter that was hacking the website of the company to uncover secrets. The ARG was made on the hiatus between season 2 and 3 of the series.





In 2007, the rock band Nine Inch Nails made its own ARG with the help of 42 entertainment. It was made to heavily promote their last album at the time, Year Zero, a concept album set on a dystopian future where strange creatures have invaded the earth, setting America to the year 0, year of a new start for society. The ARG started with a concert T-shirt, where highlighted letters gave clues to a website containing dozens of images of a dystopian future in the next 15 years. During concerts in Europe, various USB drives were found in toilets and places around, inside these USBs there were songs for their upcoming album as well as videoclips. Static interferences were found at the end of these songs, running them through a spectrogram revealed images like the one in this paragraph, of "The Presence", as well as telephone numbers that revealed more websites and images. This process followed for the next months until a selected few were able to go to a secret show for NIN playing their new album in a Role playing setting where the audience acted as the resistance for the government in the fictional story for the album, at the end of the concert the authorities from the story's government interrupted the concert and dispatched everyone from the warehouse. The ARG had a big following and turned sells for the album to a great scale.

From this point on, companies like Valve has used the ARG format to tamper and play with their followers, an update for the game Portal included several radio frequencies that revealed images and urls for the aperture science website and commands to use in it as well as passwords and login credentials. All this to promote the sequel to the game, Portal 2 and its comic LabRat.

Other companies have used the format to promote products, Reebok, Nike, Tv agencies, series, movies, etc. Most of them just play a little with the player and don't offer obtuse puzzles, just the sensation of an original storytelling and a fictional world merged with the real one.

Then something strange happened in 2012. In the 4chan forums /x/ that treats paranormal activities and /b/ for random posting, an anonymous user by the name of 3301 posted a picture saying his organization was seeking the most intelligent people to join them.



Competitors were given a hint that conducted to an image of a Cicada that had to be run through a program that read inner values of the image to display a text. From here started one of the most obtuse, difficult and challenging ARGs in history, and also the first real ARG that actually could potentially not be an actual ARG, but as the first message implied, "a test to find the most intelligent individuals for their organization", as nobody in the world has claimed to be the responsible or creator of this ARG yet. I'm not going to go deep into the details of the ARG as it is too complicated, to give an

idea, the ARG consisted heavily in programming, mathematics, audio, music, video, image and text encryption, databases, web and computer science knowledge to solve really specific puzzles and tests, as well as gathering the community solving the puzzle as some of the tests included finding posters in various cities of the world. Adding to the confirmation that this ARG was not made by one person but a big number of people around the globe.

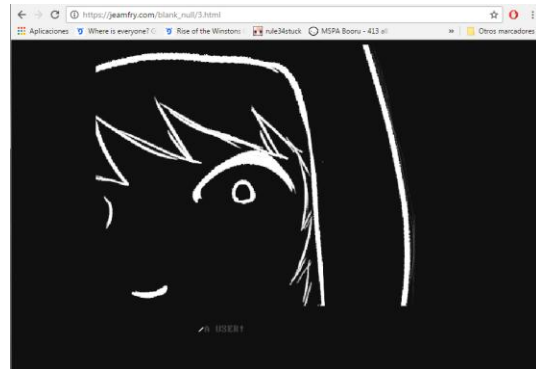


At the end of this ARG the participants that got to solve the last clue were asked personally to create a program and website that connected to a .onion “thor” domain and a lot of other specifications that are not well documented, as the people that submitted their entries and were finally selected were not heard from never again in the internet. This happening came to be the next 2 subsequent years in January of 2013 and 2014, picking new people every year with similar tests and similar results, create and program something that they were told, submit it and after some days, submitters “selected” were never heard from again. In 2015 no new event was held or a new message from 3301 was posted, only really bad copies and impersonators.

Cicada 3301 was and is to this day one of the most game changing “possible to be” ARGs to date, innovating on its story and themes as well as the concept of how an ARG was meant to be, a secret and a “real” phenomenon or event, as to this day nobody still knows the end goal for the whole ARG. ARG or not, Cicada 3301 is regarded as one of the most challenging and best ARGs in history.

## Storytelling around computer science and 4th wall breaking and Wrap up

After reviewing the history of the web technologies, adventure video games, Webcomics and ARGs, It's time to talk about their stories and stories similar to the ones I want to create with this project. Mainly inspiration from this project come from the desire to tell stories that people find intriguing and engaging, contextualizing them with the medium they are part of, by this I mean creating stories tied to the game they are in. Explaining ARGs was an important part for understanding this project's ambition with its story. The use of the interface to create an explorable world, looking for clues to the missing memories from an unknown character named G, found all alone in one of these spaces, it combines the premises of adventure games for the gameplay, the visual manifestation of modern webcomics and the interactivity and elements from an ARG. "blank null" takes inspiration from sci-fi punk stories such as the anime "Lain".



## Lain and computer science as an inspiration

"Lain" is a story about a girl that receives a message from her recently dead school friend, saying she's with god now, and that god is in the internet. This leads Lain to buy a computer and investigate in the web about this "god", making her understand and discover the many faces of anonymity, human interactions, human nature and behaviour and to understand the place of humans in a world where technology is a great influence, in the process she will discover more about herself in ways she could not even imagine from the beginning. The anime, aired originally on September of 1998 had a mildly successful run, gathering a fast cult-following. The show was written with fan interpretation in mind, as most plot points are open ended and can be loosely tied together with some logical and critical thinking.



We take Lain as a starting point and example for this storytelling section as it was one of the first to use the technological reality in place as part of the plot. The show uses real computer science terms, concepts and lingo to explain certain phenomena on the plot. People that understand computer science will easily follow the explanations and plot points as there is logic behind the hows and whys things work in the narrative, such as why some computers can't browse faster on the internet without a specific chip that boosts the processing power of the computer, computers in Lain are written with the cooling factor and technical limitations in mind, by the 10th episode Lain's computer is so powerful that it needs its own cooling infrastructure around the machine to keep it from overheating, adding a layer of depth to the character's ambitions and personality while giving a realism to the world that most other animes and works of TV fiction in the era didn't have.



This, in the end, is an aspect "blank null" takes up for the narrative, the realism on technical limitations to shape the world and realism of the story while also adding to the immersion and the aesthetic of the experience, as the story forces you to hack into 1990's computers, forcing me as a creator to borrow aesthetics and gimmicks from that era, allowing me to use these era limitations to build games and puzzles around them.

## 4th wall breaking as a plot device

The 4th wall refers to the inexistent barrier between the stage performers in a theatrical work or opera and the audience. This wall in most conventions and cases is "not broken" keeping the user from being interacted with or kept from interacting with the story in a direct way. This concept was a staple in theater from the 16th century to the 19th century.

In this sense, breaking the fourth wall can be described as "any instance in which this performance convention, is violated." Stories that use this plot device started to get popularized in theater in modern times, an example was when in "Peter Pan" Peter encourages kids to clap for Tinkerbell. The acceptance of the transparency of the fourth wall is part of the suspension of disbelief between a work of fiction and an audience, allowing them to enjoy the fiction as if they were observing real events. Critic Vincent

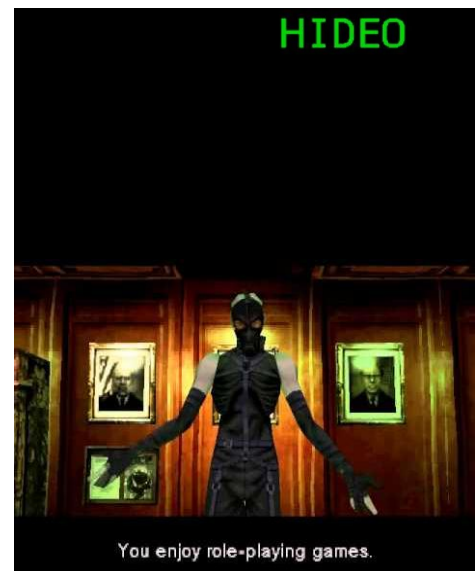


Canby described it in 1987 as "that invisible scrim that forever separates the audience from the stage".

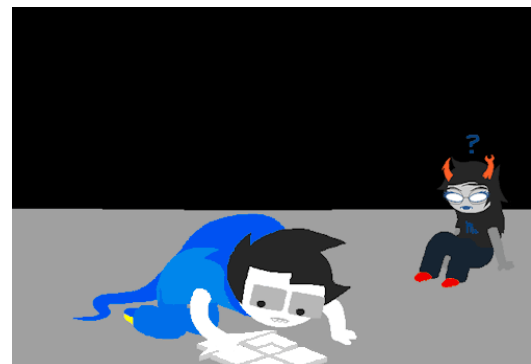
Oliver Hardy was probably the first to break the fourth wall, in his movies with Stan Laurel, by staring at the camera to seek comprehension from the viewers. Groucho Marx spoke directly to the audience in "Animal Crackers", 1930, and "Horse Feathers", 1932. Comedy films by Mel Brooks, Monty Python, and Zucker, Abrahams and Zucker frequently broke the fourth wall. The John Hughes movie Ferris Bueller's Day Off is another well-known fourth-wall-breaking movie. Bueller, played by Matthew Broderick, often turns to the camera and breaks character to tell his thought process or explain his reasoning.

In TV shows the same notion of 4th wall breaking is seen, with not much implication from the viewer.

In video games the possibilities were there to make a story that fits into the videogame narrative. Metal gear Solid may be the clearest example for this. The first game had a boss, Psycho Mantis, that prompted interaction with the character, the character acknowledged the existence of the player, not the main character, Snake; and asked simple tasks like leaving the controller on the floor to display his psychic powers by moving it (using the vibration feature in the controllers) also reading your memory card to say things like "I see you like Capcom games like Ghouls, interesting", during the battle the screen would simulate the disconnection or turn off of the console by using a mock up video input screen. In the second entry in the series the whole plot ends up acknowledging the fact that the characters are in a videogame and that nothing is real.



Stories that break the fourth wall are the main inspiration for blank null, Homestuck, being one of the most important, builds itself as a self-referential, self-conscious work with a story that acknowledges the fact that the characters and events are happening inside a webcomic. Plot elements revolve around instruments that shape the rules of the world inside the webcomic to extend it and tamper with its own



story and medium. There are moments where the main character acquires a new power that allow him to go back in the story and rewrite it and the changes happen. For example, the character goes back from page 7000 to page 1000 and leaves an object that previously was not there, from that moment onward every new person that reads the comic will see this object and then comprehend later on why it was there in the first place, in comparison, early readers were not presented with this object in page 1000 when reading for the first time and got to experience the moment that the story got rewritten and its consequences. This goes to show a narrative where characters are aware of their mere existence in a fictional story and medium.

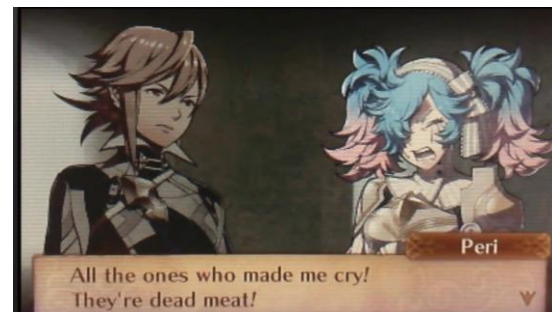


## The Wrap up

The opposite effect is what blank null wants to accomplish. Homestuck's method can be seen as a further 4th wall breaking technique as it's actually acknowledging its existence as a webcomic and not in the real world, one could say that characters are even more real, because they are aware of their own existence and this plain of existence, the one in which the reader exists, blank null wants a simpler approach where two dimensions in the same existential plane interact, the one in which, you the player is able to interact with the character G in another universe in which the company "Nulwo" existed and accomplished success in the computer market, far beyond Microsoft and Apple, in the first chapters this will not be revealed, instead, the world that the player interacts with is planned to be perceived as the same one in which the player resides.

This method of storytelling allows me as a writer to make a cohesive story that in the end explains how you can interact with a different universe connecting to a terminal in another place through your computer by using plot devices that give an explanation as to why or well one that the reader will have to guess and connect the dots in the story to reach it. From a motivational standpoint, the player finds motivation in unraveling the secrets, but this must be done in a way that the story is presented with bits of information without conclusion and promising them to find the end of it after each little puzzle or section, this keeps the narrative interesting and full of mystery, this may be boosted to the fact that the story will try to make the player empathize with the main character, G, by making dialogs and making the character open up to the player about insecurities, also contrasting with good and funny moments displaying more of the good side of the character's personality, this gets the player to know better G and maybe creating an emotional bond, generating a tighter ambition to reach the goal.

These last emotional "mechanics" come from personal experience with games such as Fire emblem and various video games, where you as a player or in the world as an avatar, are prompted to interact with characters to know them better, creating an emotional bond. This has been done since the beginning of interactive media to form a stronger and more positive opinion on the medium and experience as well as an immersion layer for the player to get more emotional feedback from the game.



# Project Planification



## Memory Structure

The structure for the Memory will follow that of a videogame due to the similarities.  
The structure goes as follows:

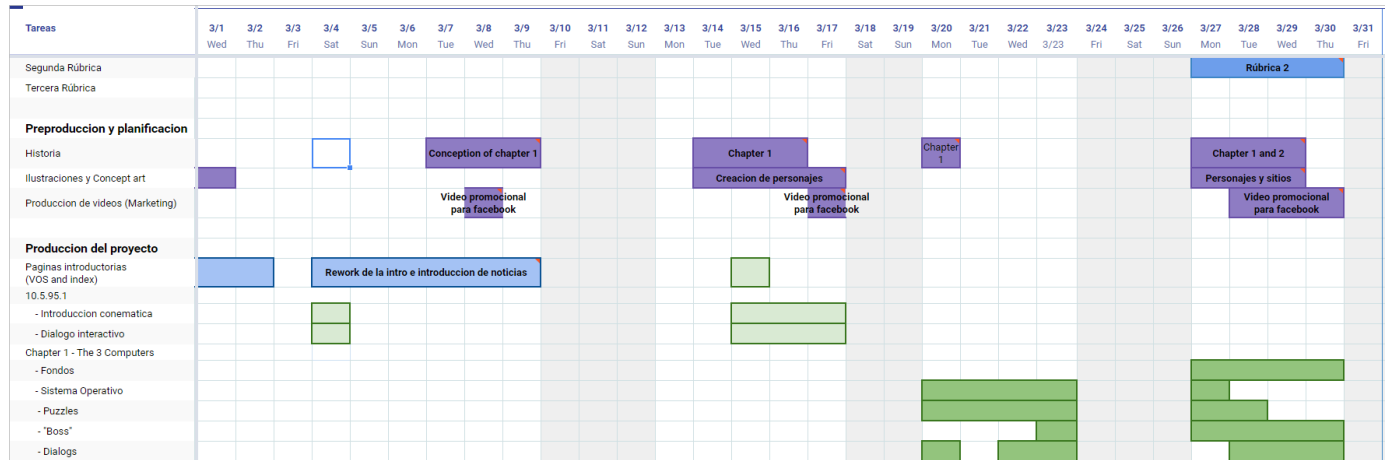
- Index
- Resume
- Introduction: Objectives, Motivation and context
- State of art
- Planification, budget and Work methodology
- Specifications: Interfaces, UX, tests with users,...
- Game Design Document
- Development: technologic choice, Data base, programming structure,...
- Marketing
- Final result
- Conclusions
- Bibliography

## Organization of the project

### Gantt diagram

Only the period between March and May will be accounted for, as February was dedicated solely to attending TFG classes and not developing the work.

[A Gantt diagram is being used to plan the work done in the project.](#)



This is the tool I'll use to manage the project and my time schedule. As long as that every week I fulfill the tasks everything will be good.

I use a Gantt diagram as a calendar and organizing tool because I think it is the best method for me to organize myself and my time. Using this I know which parts I should work on every day and what to spend my time on.

## Github

Another tool I've been using since the start of the project is Github. Github allows me to commit changes on the code and it's a good tracking tool that tells how fast or intensively the project has been developing

The screenshot displays the GitHub web interface for the 'blank\_Null' repository. The left sidebar shows a list of repositories, with 'blank\_Null' selected. The main area shows a commit history for the 'master' branch, listing various commits by Gill P. The selected commit is 'more on Room 3' (1750b42), which includes changes to '10.0.0.3\index.html'. The right pane shows a diff view of the 'index.html' file, highlighting changes to the HTML structure, including the addition of new divs and scripts.

**Commit History (selected):**

- Load screen glitch (43 minutes ago by Gill P)
- Typo in daughter name (1 hour ago by Gill P)
- added damage Sound in 10.0.0.3 (1 hour ago by Gill P)
- Tweaking 10.0.0.3 (2 hours ago by Gill P)
- Final changes to everything (22 hours ago by Gill P)
- Changes on things (2 days ago by Gill P)
- Tweaks (5 days ago by Gill P)
- Finished boos fight. v 1.0 (9 days ago by Gill P)
- more on Room 3 (10 days ago by Gill P)
- 10.0.0.3\index.html
- 10.0.0.3\js\CurveExtras.js
- 10.0.0.3\mod\Lives.mtl
- 10.0.0.3\mod\Lives.obj
- Rotation and positioning of tvs (12 days ago by Gill P)
- Development on Room3 (12 days ago by Gill P)
- Fix :V (13 days ago by Gill P)
- expand (13 days ago by Gill P)
- heaven (13 days ago by Gill P)
- the hell

**Diff View (selected commit: 1750b42):**

```

@@ -151,9 +151,15 @@
</div>
</th>
<th style="width:40%;text-align:left;position:relative;">
- <div style="top: 0; position: absolute;">
- <div id="answer1" onclick="insertSup($(this).html())"
- style="display: none;" onclick="" class="img">
- <img style='width:100%;height:auto;' src='img/
- safe_.png'>
+ <div style="top: -25px; position: absolute;">
+ <div id="answer1" onclick="" class="answer">
+ <div id="charge1" style="background:red;
+ position:relative; width:0%; color:white;">0%</
+ div>
+ </div>
+ <div id="answer2" onclick="" class="answer">
+ <div id="charge2" style="background:red;
+ position:relative; width:0%; color:white;">0%</
+ div>
+ </div>
+ <div id="answer3" onclick="" class="answer">
+ <div id="charge3" style="background:red;
+ position:relative; width:0%; color:white;">0%</
+ div>
+ </div>
+ </div>
+ <div id="Gtext" class="Gtext">
@@ -189,6 +195,7 @@
<script src="js/BloomPass.js"></script>
<script src="js/ShaderPass.js"></script>
+ <script src="js/CurveExtras.js"></script>
+ <script src="js/FBXLoader2.js"></script>
@@ -231,6 +238,9 @@
var mouse = new THREE.Vector2();
INTERSECTED

```

## Phases

### Demo and pre-project

During October 2015 I came up with the concept of an interactive story using HTML technologies using a female lead character that's inside a computer and is helped by the player.

A demo was made that can be seen [here](#). It was thought to be made in a schedule and periodical chapter releases, needless to say the project fell apart due to my incompetence to keep the project up along with studies and job.

When time came to choose what would my TFG be about I thought about the scrapped project, blank null could be reworked and revived.

This conception phase is not included in further schedules and documents shown, but as an important part for the context of the project I took the liberty of explaining.

### January - February: Chapter 0.1

During the months of January to February, I worked on doing "Chapter 0" for the comic. It consisted in coding and doing a recreation of a Windows 98 Login Screen in HTML 5. It took around 10 hours of effort plus 5 additional for the next inner part that consisted in recycling the first puzzle for the demo and bring that into the new project. Also without counting the 4 hours I spent back in 2015 editing the video in this section and the additional 5 for doing 3d models for a room that appears in that video. This is the only thing that will be recycled from the demo as it still keeps the vision I had for the project.

### March and April: Chapter 0.2, Headings (Rúbricas) and starting Chapter 1.

I have been since the delivery of the first Heading thinking about the load of work this project could represent. I have changed my goals from making 3 chapters to only Chapter 0 and 1, as the work put into the project is bigger than expected.

From March to May I intend to make, polish and finish chapter 0 and finally release the content to my followers, promote the work in social media and generate an expectation for chapter 1 by doing promos, videos and ads, as well as a possible guerrilla advertising campaign.

Methodology on work will be on putting everyday of the week from Monday to Friday time (as little as 1 hour) on coding the game as well as some days do the Memory for the project. Now with the Gantt diagram updated, we can see how much time I will take on doing most of thing now that chapter 2 to 3 will be cut off from the June final deadline.

## May and June: Chapter 1

Chapter 1 is going to be handled through the month of April, being very condensed with 3d modeling, video edition, jquery animation, and coding of an entire little adventure and exploration segment with little puzzles. The first week is going to be spent mostly on drawing the assets and modeling the environment while coding a bit of what should be the skeleton for this chapter. 2nd week is going to be spent on dialogs and coding interactions and features. In this period 3d modeling will be made everyday, Mondays and Wednesdays to illustrate G's sprites and additional material. Puzzle coding and thought will be put on almost everyday of the week and programming too. Animation for both videos and animated segments will be almost every day too.

Finally on the last week of June polishing the code and writing of the Memory will be in place. A Game Design Document will be written and experiences as well as the Making of of the project.

By this point the project should be finished for the TFG.

## Budget

[An excel version of the budget is available here](#)

DESCRIPCION	UNIDADES	PRECIO o Precio/hora	Horas	Dias/semana	Semanas/Mes	Meses	Horas Totales 300.00	TOTAL
Arte	1.00	8.00	1.50	5.00	2.00	4.00	60.00	480.00
Programacion	1.00	10.00	1.50	5.00	4.00	4.00	120.00	1,200.00
Postproduccion	1.00	8.00	1.88	2.00	3.00	4.00	45.00	360.00
Animacion	1.00	11.00	0.38	5.00	4.00	4.00	30.00	330.00
Gestion	1.00	7.00	1.88	1.00	4.00	4.00	30.00	210.00
Community Managing	1.00	7.00	0.19	5.00	4.00	4.00	15.00	105.00
Ordenador + Hardware	1.00	1,200.00						1,200.00
Software (After Effects)	1.00	19.99	Subscription			4.00		79.96
Software (3DS Max)	1.00	266.20	Subscription			4.00		1,064.80
Software (Photoshop)	1.00	19.99	Subscription			4.00		79.96
Tablet grafica	1.00	55.00						55.00
Lapices	15.00	2.50						37.50
Rotuladores	8.00	3.00						24.00
Libretas	3.00	8.00						24.00
Servidor	1.00	130.00						130.00
Dominio (Nulwo.com, thevoidofsecrets.com & Blank-null.com)	3.00	9.95						29.85
<b>TOTAL</b>								<b>5,410.07</b>

**TOTAL PRESUPUESTO**

**5,410.07 €**

For this project's budget, I take on account that I am one sole developer doing the tasks of many people. I made a table counting the percentage that each task would take approximately taking from 300 hours that are all the credits for the module.

		Percentage of time	Total Hours
Un trabajador	300	100	300
Arte	300	20	60
Programacion	300	40	120
Postproduccion	300	15	45
Animacion	300	10	30
Gestion	300	10	30
Community Managing	300	5	15
		100	300

Then we take on account the hardware and software expenses, from which software take a monthly subscription fee. The for hardware we take the computer and its accessories and the graphical tablet for drawing on account. Then art supplies like pencils, markers and notebooks for doing notes and drawing doodles. Finally the server and 3 domain names for the project to be hosted on.



## Competition and Competitors

Games like Fallout and Telltale games are an immediate competition to my project. These are games that feature exploration and character interaction using dialog interfaces and object hunting and exploring. Fallout being an example of open world in a videogame and critical and moral choice making, the game is really popular and loved amongst gamers. Telltale games like The Walking dead have a huge following from a target audience that loves story driven games.



More like competition, the followers for these stories could find liking in a light interactive experience that resembles their favorite franchises such as my project, indirect competition for trying to make the gamer a fan of my work is the objective to work towards in this situation.



Similarly, webcomic fans are part of my target audience. As such I am forced to compete with the thousands of webcomics around that could attract people for their better art style and storylines, yet lovers of webcomics tend to read multiple of these in the span of several months or years, so the possibility for them finding a liking to my project enough to stick to it and follow it is a possibility.

As such, web games and point and click indie games are also competition, these games, some of them made on a professional budget, represent a stone in the way for popularizing my webcomic. The rise of interesting games like "hacknet", or web games featured in GameJolt.com can overshadow the time my target audience spends reading my project over preferring more indie game content.

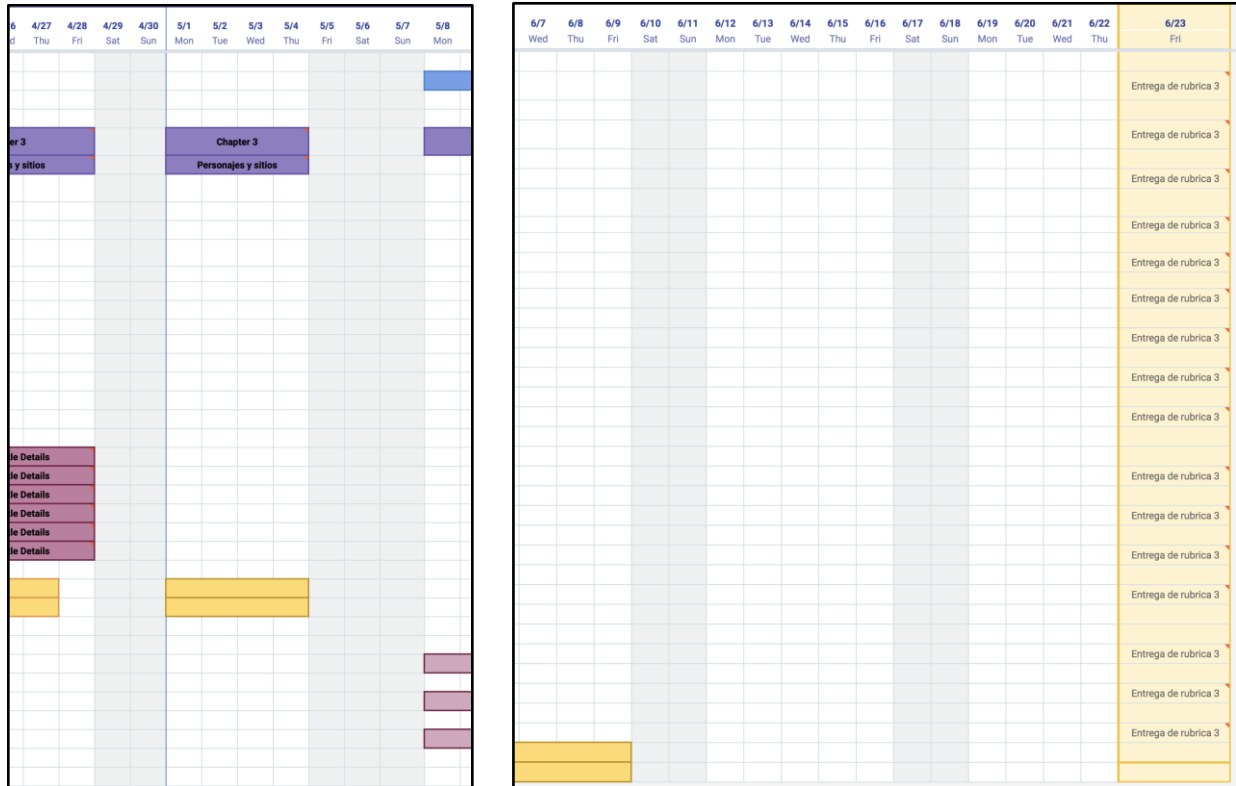
## Risks and Hazards

### Risks:

- Not having enough time to accomplish some tasks on time due to other reasons such as studies or work, as well as taking too long to research on some aspect or taking too long to accomplish a task due to it being too time consuming, more than expected.
- The overly ambitious project could end up taking more time than expected due to the complexity of some parts and me having to cut content entirely due to time constraints.

### Hazards:

- A better planning and taking time from other tasks that don't require that much time or don't require too much polish, a hiatus of one week after completion of chapter 2 and 2 weeks before the project allows me to fix any problems or have the time to catch up with the inconveniences if any problem rises.
- A solution for the magnitude and ambition of the project threatening to cut content from the game is the same one as the before mentioned, having to take away details and work hours from various aspects from the production to have a complete experience at the expense of some cut corners here and there that may water the magnitude of some gameplay features or aesthetic impact



## Validation

At the end of the project I think that the method of validation for most of things done in the project will be watched upon two scales of commitment:

- Quality: The quality of the content put into the project, good illustrations, good game mechanics, fun puzzles, fun interaction and navigation, engaging dialogue, immersion, etc.
- Assolation of idealistic objectives: This is measured upon the previously mentioned, if every one of these points are met for every element in the project then I will give the project as completed and accomplished FULLY, in the most ideal situation.

# Specifications

During the development of the project some aspects must be taken in account, for example de user experience, the usability and the game design aspect of it so that the player can have an easy experience on the game and be able to play it without any moments in which he or she feel lost, frustrated or with the drive to leave the game.

One of the first things to do in this project was doing a Usability test for the chapter 0 in the beta state of development. Here is the documentation:

[Testing plan](#)

[Report](#)

[Results](#)

As a resume from the experience from the test I can summarise that the test was taken abroad with ease and no problems, all footage recorded and information is being used at the moment to tweak and improve the tested section of the game. All results from this tests are written in the Test report.

Thanks to this testing I was able to tweak things like little dialogue options, functionality, and get a sense of how the game is portrayed in its aesthetics, characters and pacing. With this information I was able to make shorter some parts to make them better paced and more enjoyable.

# Game Design Document



Este documento estará en castellano.

## 1.1 Overview

### 1.1 Pitch

Juego online de exploración, diálogos y puzzles online escrito en javascript y tecnologías HTML5. El jugador se interna en la web de una compañía tecnológica abandonada para encontrar una Inteligencia Artificial sin memoria. Su objetivo es acompañar a esta IA por los ordenadores y la red de la compañía, resolviendo misterios y puzzles para descubrir su pasado y el de la compañía.

### 1.2 Concepto

El aspecto de exploración del juego viene dado por la naturaleza point and click del juego. El usuario navega y hace click en entornos 3D y lee documentos y va averiguando más sobre la historia y el lore del juego.

El aspecto dialogal del juego viene por los diálogos y conversaciones personalizadas que el jugador tiene con el personaje principal, G. Las conversaciones tienen diferentes ramas de interacción que dan una capa personal a cada conversación y playthrough.

El último aspecto, el de puzzles viene dado por los puzzles situacionales en los que el jugador es puesto. Siempre hay un objetivo en mente, pero durante la búsqueda de este objetivo encontrará pequeños mini objetivos que estarán a su vez bloqueados o escondidos detrás de situaciones en las que conectar puntos y pistas serán necesarios así como observar el entorno y asociar una pista con este para encontrar elementos que le ayudarán a avanzar por la historia y acercarlo al objetivo poco a poco.

Durante todos estos procesos el jugador G va discutiendo con el usuario, desarrollando su relación en formas negativas o positivas. La idea es que se cree un vínculo.

La recompensa final de los puzzles y exploración es averiguar más sobre el misterio y la satisfacción de la resolución de un problema, la epifanía y ese momento "AJÁ!" que viene de la resolución de problemas. Mantiene al jugador motivado a continuar.

Finalmente el usuario será dado parte del lore, conocerá más personajes en el pasado y conocerá parte de la historia de G.



Pantalla de blank(null) en el capítulo 1. En esta habitación el jugador ha de interactuar con elementos y averiguar pistas que le ayudarán a acercarse a resolver el misterio.

## 2 Elementos

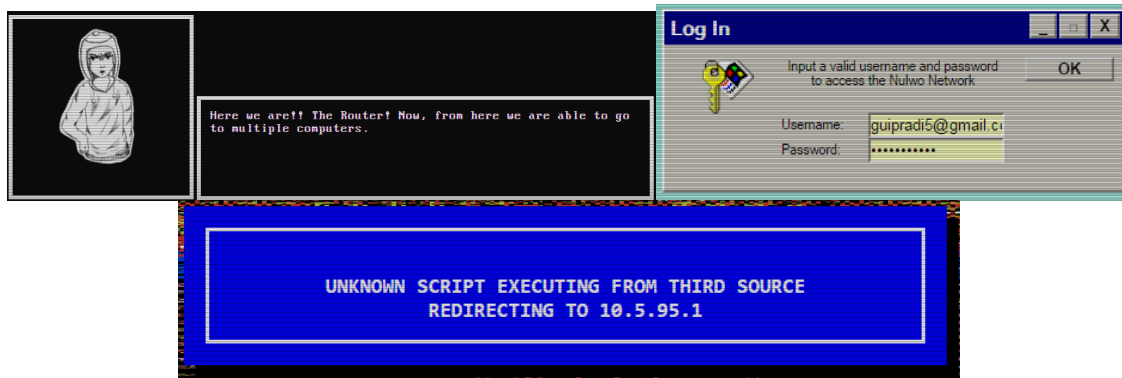
### 2.1 Elementos del capítulo 0

Debido a la diferencia entre capítulos y modos de juego, ambos capítulos se diferenciarán.

- Ratón y teclas: Únicos elementos que tiene el jugador para interactuar con el entorno y seleccionar elementos para generar cambios en el medio.



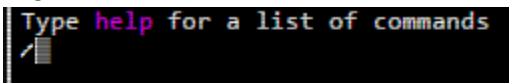
- Ventanas: Cuadros en los que mensajes e información es presentada para el jugador.



- Elementos interactivos: Entre estos tenemos que incluir botones como por ejemplo as X en la parte superior de ventanas de Sistema Operativo. También incluimos las respuestas dadas a G.



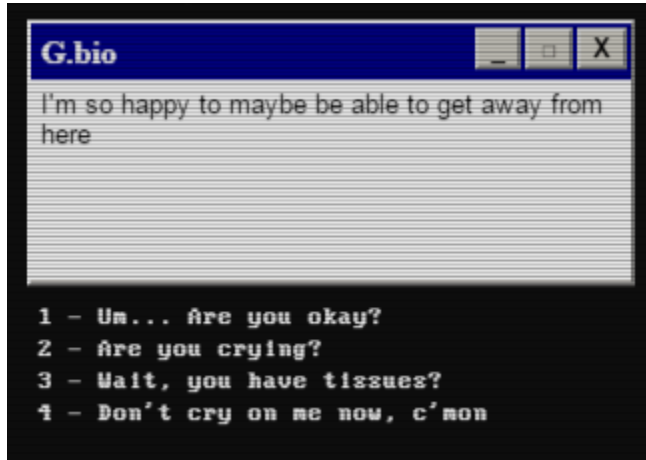
- Campos de texto: Aquí se introduce texto de cualquier manera, ya sea para logearse o comunicarse con la interfaz para resolver puzzles



- G: Protagonista. Su retrato se encuentra prácticamente siempre a la vista. No es interactuar directamente haciendo click, pero si mediante diálogo.



- Cajas de diálogo: Son las cajas en las que G o el sistema manda mensajes al jugador o sirven para que estos se expresen.



- Videos/Imágenes: Elementos no interactivables que permiten mostrar contenido multimedia primordiales para puzzles o avanzar la historia.

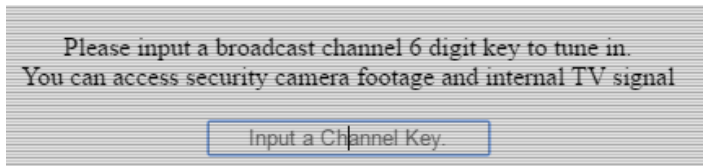


## 2.2 Elementos del capítulo 1. Habitaciones 1 y 2

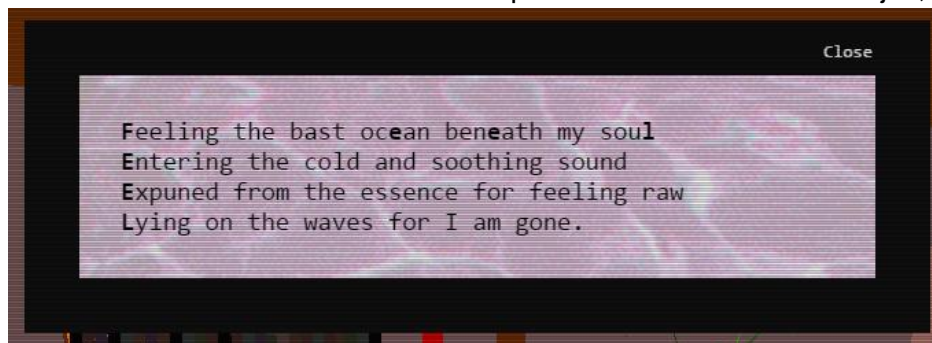
- Elementos interactivos: En estos entornos 3D, los elementos interactivos se iluminarán cuando el jugador pase el mouse por encima de ellos.



- Elementos no interactivos: Estos son parte del escenario y no reaccionan ante nada de lo que ocurra en el juego.
- Cajas de texto: Aquí el usuario pone información que luego el sistema comprobará para avanzar en la historia.



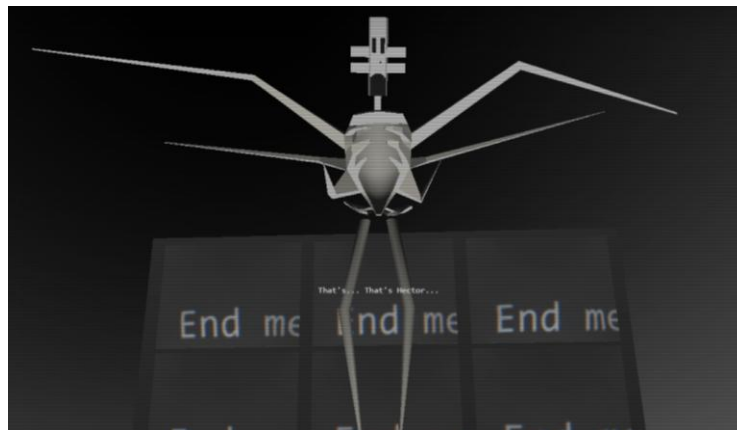
- Ventanas: En estas ventanas del sistema operativo se muestran mensajes, emails, etc.



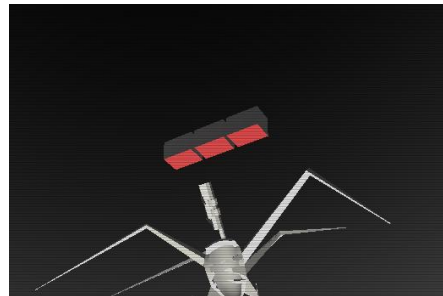
## 2.3 Elementos del capítulo 1. PC 3

Aquí es donde todas las normas anteriormente establecidas se van por la borda, en la habitación 3 tenemos una “batalla de jefe” por así decirlo, donde las mecánicas anteriormente definidas cambian del todo por otras.

- H.: Antagonista y elemento al que hay que derrotar. Flota en el medio de la habitación rodeado por 3 ordenadores. No es interactuable directamente. Tiene una barra de 3 vidas que se ha de agotar. Cada una de las vidas se agota “sobrecargando” cada uno de los 3 ordenadores gigantes en la habitación. Lanzando un rayo eléctrico que debilitará a H.



- Vida de H., barra roja con 3 divisiones que representa su vida o salud.

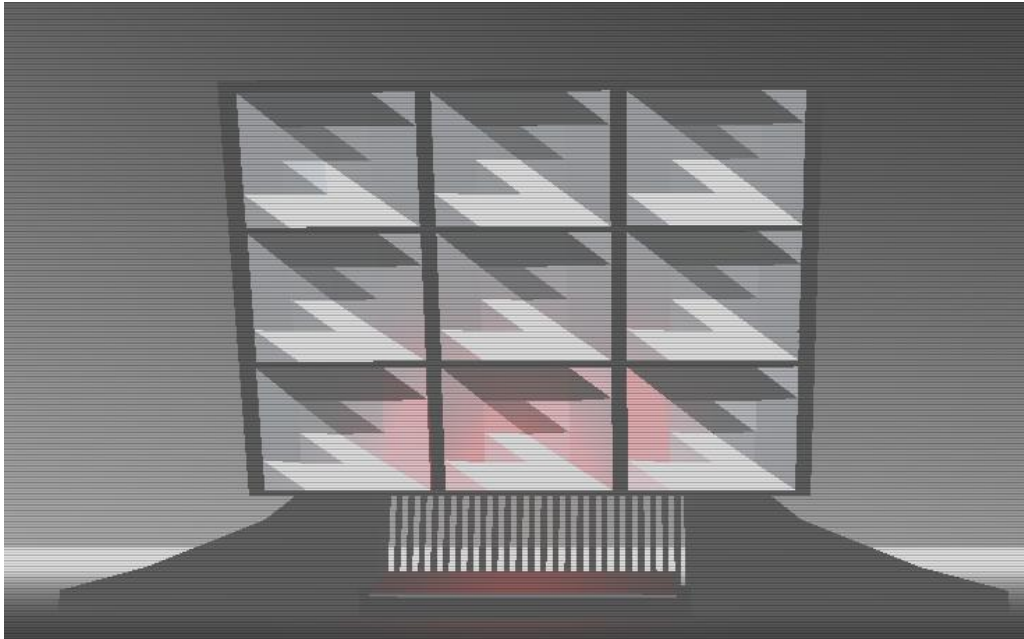


- Jugador: Representación en primera persona del jugador. Puede moverse con las teclas WASD e interactúa con las teclas SPACE y/o click.
- G.: Protagonista de la historia. Da consejos y ayuda al jugador al principio con mensajes.





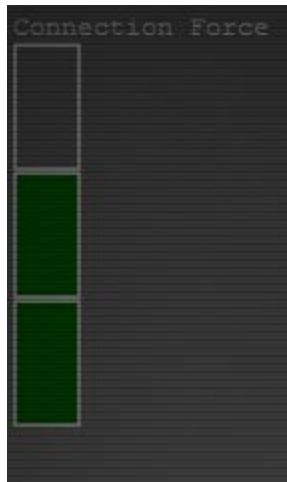
- Ordenadores: Elementos con los que el jugador ha de interactuar presionando las teclas SPACE y CLICK para sobrecargarlos, en este proceso una barra en la UI indica el progreso de sobrecarga, cuando llega a 100% el ordenador libera un rayo a H, reduciendo una de sus vidas.



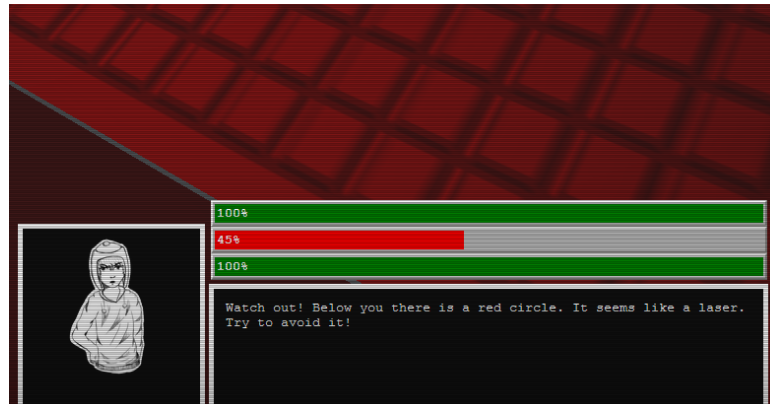
- Zonas de interacción: Cada ordenador tiene una zona de interacción donde el jugador puede sobrecargar la terminal.
- Rayo mortal: H libera un rayo cada 15 segundos, el rayo tiene un tiempo de carga de 11 segundos que indica visualmente y auditivamente en que momento el rayo se descargará. El rayo sigue al jugador por debajo suyo. Entre los segundos 11 y 15 el rayo se queda paralizado en el suelo generando unos “beeps” que indican que está listo y en el segundo 15 se descarga. Si el jugador se encuentra dentro del área del rayo, perderá una vida.



- Barrera invisible: Barrera que no permite al jugador ir más allá del límite establecido.
- UI
  - Vida del jugador: La vida del jugador está especificada como “Fuerza de la conexión”. Se supone que si el jugador falla, no ocurre ninguna muerte ni nada, simplemente el jugador se desconecta ya que los rayos debilitan la fuerza de conexión, algo que es coherente dentro del mundo del juego



- Cargas de las terminales: Aquí se indica el nivel de carga de cada ordenador, la carga disminuye lentamente si no se presiona ningún botón. Y aumenta una cantidad fija con cada click o presión de la barra espaciadora.



## 3 MDA

### 3.1 Esquema MDA

Estéticas	Dinámicas	Mecánicas
PC1, 2 y 3: Escenario en 3D	1) Buscar soluciones	Cap 0, PC1 y 2: Hacer Click
Cap 0: Interfaz de diálogos y ventanas	2) Buscar respuestas a los misterios	Cap 0, PC1 y 2: Escribir
Cap 0: Puzzle del cmd	3) Buscar soluciones de los puzzles	PC1 y 2: Girar camara
Cap 1: Caja de texto de G.	4) Desarrollo de una relación con G	PC 3: Movimiento
PC3: Vida propia y de H.	5) Conseguir más lore y avanzar en la historia	Dialogos con G.
10.0.0.0 Esquema de Ordenadores		Puzzle del PC1
		Puzzle del PC2
		PC3: Sobrecarga de la Terminal
		PC3: Esquivar rayos
		PC3: Rayo Mortal
		Cap 0: Puzle del cmd

## 3.2 Mecánicas y Level Design

### 3.2.1 Click

Se permite hacer click en elementos interactivables, esto permite al jugador obtener respuestas del juego en forma de información o avance en la historia

### 3.2.2 Escribir

Permite la interacción con el juego mediante input de texto. Si el artefacto del juego detecta que el input es correcto, avanza a la siguiente fase

### 3.2.3 Girar Cámara

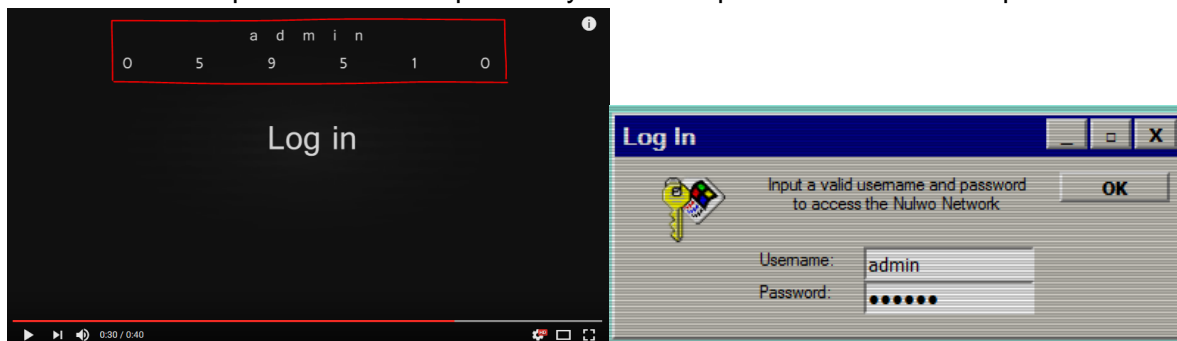
Arrastrando el escenario podemos girar la cámara en los PC1 y 2. Una solución intuitiva en un juego de exploración. Con posición fija.

### 3.2.4 Movimiento

Usando las teclas WASD podemos movernos en el entorno del PC3

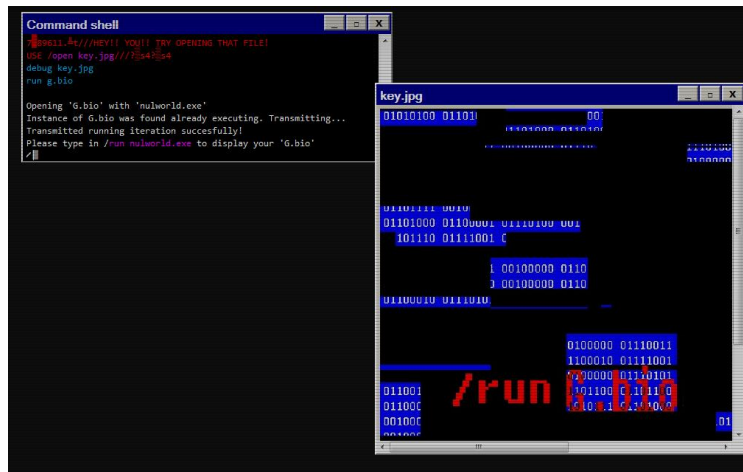
### 3.2.6 Capítulo 0:

En el capítulo 0 somos introducidos en el mundo de blank(null). Primero tenemos la página de login que es un escritorio de ordenador. El usuario deberá resolver el "puzzle". Hay un video a un lado que contiene una pista muy obvia de qué credenciales usar para continuar.



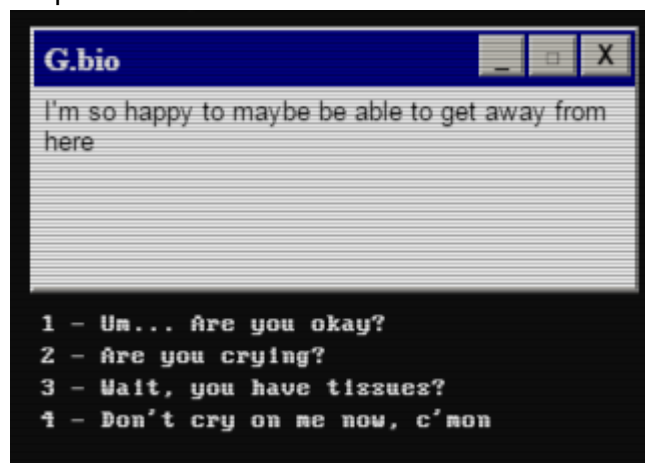
### *Puzzle del cmd*

El primer puzzle del juego implica que el jugador es expuesto a una terminal cmd. Como única pista el comando help. El usuario deberá seguir los comandos que se le presentan y deducir que hacer poco a poco. Se utiliza códigos de colores para distinguir e indicar al usuario por el puzzle. Los comandos tienen el color rosa, eventualmente el usuario aprenderá a probar cada palabra rosa en el cmd hasta llegar al final. Finalmente se le mostrará un video que lo expondrá a Nulwo, la compañía en la que está navegando. Al acabar el video será introducido a G en un diálogo.



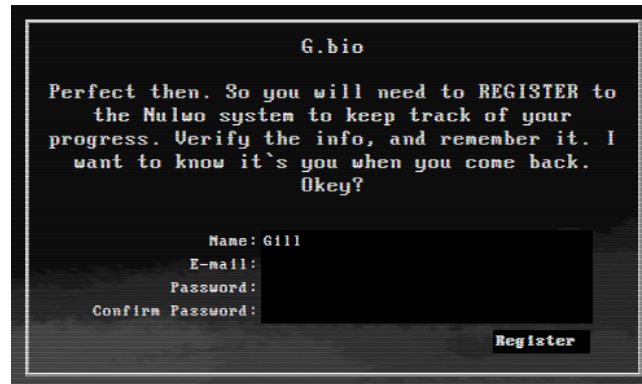
### Dialogos con G

Usando una interfaz podemos darle respuestas y hacer preguntas a G durante estas secciones de diálogo, con hacer click en las diferentes opciones podemos avanzar con el diálogo y obtener ramas de conversación únicas. Después de esta conversación el usuario sabrá el objetivo mayor del juego, averiguar el pasado de la Inteligencia Artificial, G, y descubrir más de la compañía en el proceso.



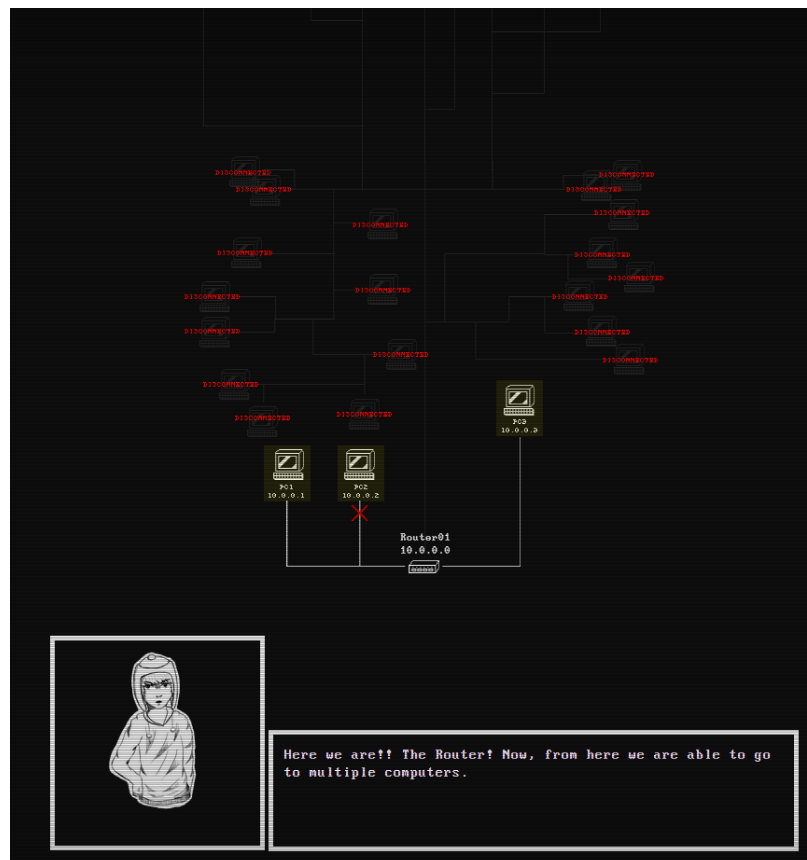
### Registro

Finalmente seremos introducidos a un ambiente más tétrico que el anterior. Aquí después de una breve conversación, G, nos dirá que tendremos que registrarnos y dar cierta información para que cuando volvamos, ella sepa que somos nosotros.



### 3.2.7 Router 10.0.0.0:

En esta parte empezamos el Capítulo 1, tendremos una interfaz para seleccionar 3 ordenadores, 2 de los cuales (PC2 y PC3) estarán bloqueados con contraseñas, el único PC disponible es el PC1, desde aquí el usuario deberá introducirse en cada uno para revelar los misterios.





### 3.2.8 Puzzle PC1

Este puzzle consiste en encontrar un primer poema entre los libros de la estantería que contiene la contraseña para una caja fuerte, el usuario sabrá esto debido a que los demás libros dan exposición sobre la dueña del ordenador, una psicóloga, y su paciente, el paciente es el responsable de la caja fuerte y del PC 2 y ha puesto una contraseña, en los mensajes el paciente le hace saber a su psicóloga que la contraseña se encuentra en un poema que él hizo, la caja fuerte, al abrirse, contiene un número de teléfono que el usuario deberá introducir en el teléfono de la habitación y escuchar una llamada que le dará finalmente la contraseña para el PC2. La habitación está inspirada en una habitación normal con pequeños nods a la estética Vaporwave.



### 3.2.9 Puzzle PC2

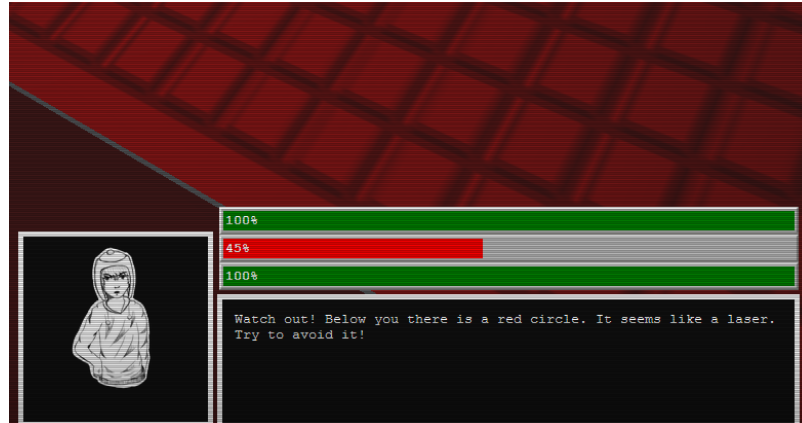
En esta habitación el usuario deberá buscar en los cajones de la mesa del fondo hasta encontrar una nota que da unas indicaciones. Que desde un objeto rojo vaya 5 pasos a la izquierda y 2 hacia arriba. La habitación está rodeada por pilares y uno de estos es rojo, el usuario ha de deducir que ha de contar 5 pilares a la izquierda de este pilar rojo y 2 más arriba y luego hacer click en este pilar indicado, encontrará una llave. En los cajones encontrará menciones a una contraseña para activar un video en el PC1, se le da un acertijo en el que se implica que se ha de usar una llave con un cofre que se encuentra en el fondo de un pozo. En el centro de la habitación hay un pozo. Si el usuario clicca al fondo del pozo se activará una ventana en la que se ve un cofre, si el usuario ha encontrado la llave con anterioridad podrá hacer click en el agujero de la llave y abrirlo, revelando esta contraseña. El usuario ha de volver al PC1, encontrar el libro específico que permite poner el código y activar la Televisión. La televisión mostrará un video, al final de este video se mostrará la contraseña al PC3. Esta habitación es gris y tétrica, cumpliendo con el estado mental de su usuario, Hector.



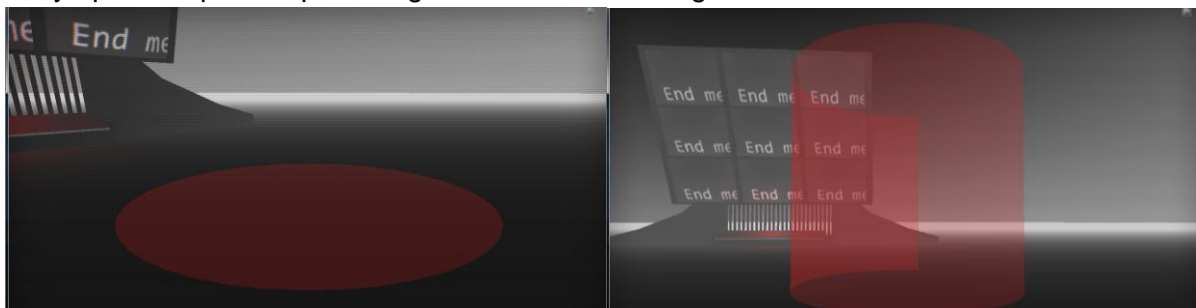
## 3.2.10 PC3:

*Sobrecarga de las terminales*

En el PC3 tendremos que derrotar a H., la eminencia que invade el ordenador. G escanea la zona revelando que las terminales de la habitación se pueden sobrecargar para despedir rayos a H y así debilitarlo. Presionando las teclas SPACE y CLICK delante de la terminal podemos sobrecargarla, el progreso se verá en las barras inferiores en la UI. si no se presionan el medidor bajará lentamente, cuando se consigue un rayo se activa dañando en una unidad de 3 a H. Se repite el proceso 2 veces más con las otras terminales para ganar.

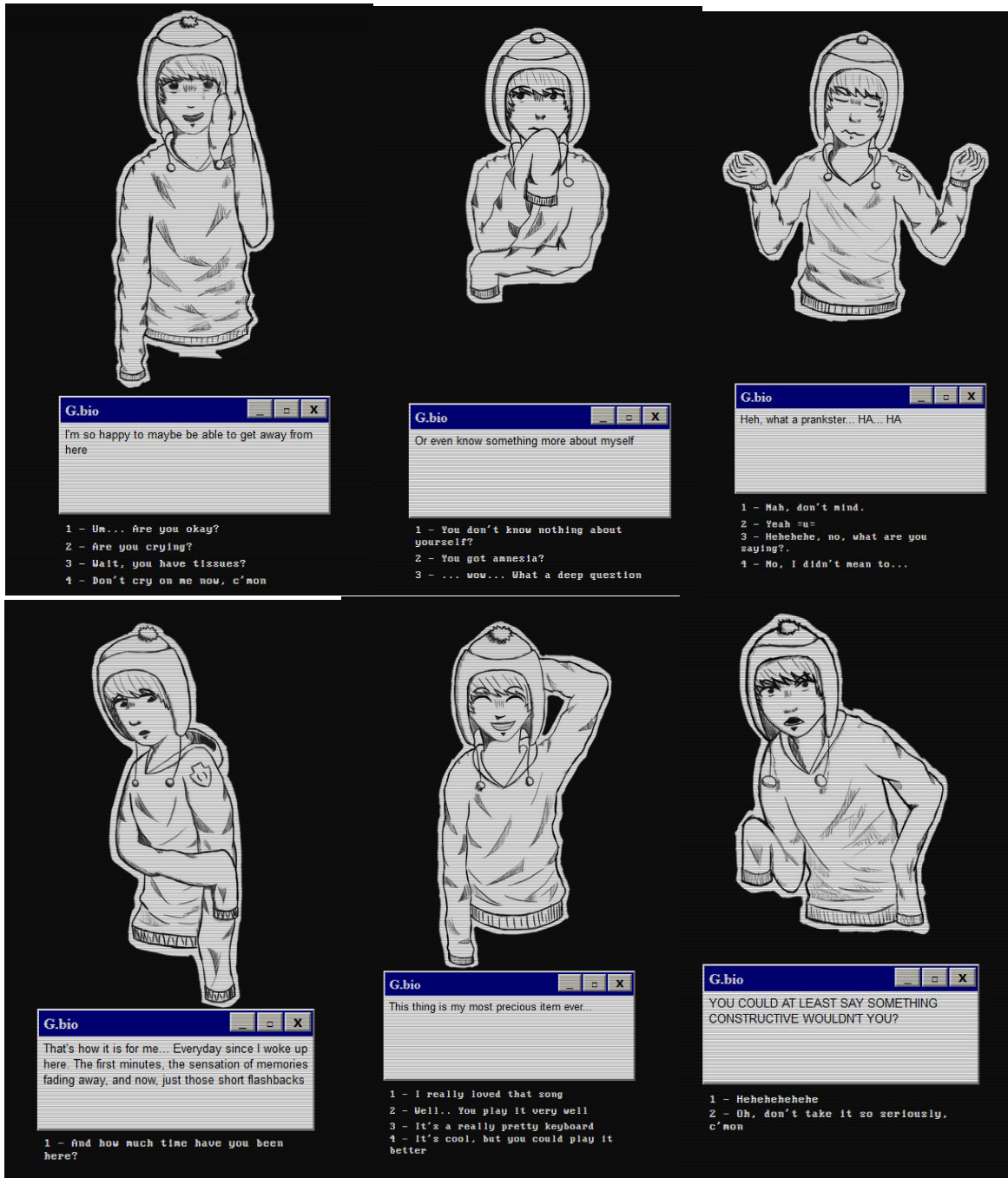
*Rayos mortales*

Como oposición a la tarea de sobrecargar las terminales tenemos que H. puede invocar un rayo desde debajo de nosotros, este rayo ha de cargarse y lo indica haciéndose poco a poco más visible y haciendo un sonido agudo de carga, durante este periodo el rayo sigue al jugador. Cuando 11 segundos pasan el rayo pasará a hacer un sonido intermitente indicando que está listo para disparar, en este momento el rayo deja de seguir al jugador y se queda quieto, en el mismo lugar hasta el segundo 15. En el segundo 15 el rayo asciende del suelo y se dispara. Si el jugador aprende el patrón y sabe identificar los sonidos y timing, es capaz fácilmente de esquivar el rayo. En caso de que toque el rayo activo, perderá una vida. Si se queda sin sus 3 vidas es redirigido al esquema de ordenadores y deberá empezar nuevamente. Cómo sobrecargar las terminales toma un tiempo superior al de carga del rayo, en algún momento el jugador se verá obligado a apartarse de la terminal y consecuentemente del rayo para esquivarlo para luego continuar sobrecargando dicha terminal.



### 3.3 Dinámicas

- Buscar soluciones:
  - Mediante la exploración y resolución de las fases y puzzles el usuario desea cumplir el objetivo principal, el de encontrar respuestas para la pregunta: “Cuál es el pasado de G.? Qué era G.? Qué es G.? Qué es Nulwo? Qué se tramaban? Qué pasó con Nulwo? Estas preguntas que se van formulando a lo largo de la historia mientras más exposición tiene el jugador a la historia es lo que lo lleva a querer averiguar y continuar. La solución de puzzles es una de las barreras entre el jugador y estas respuestas. Ya que los puzzles están metidos dentro del contexto de la historia y forman parte coherente con el mundo y lo que era, el puzzle puede darle al jugador exposición del Lore poco a poco e ir resolviendo respuestas menores. Al solucionar el puzzle entero el jugador será premiado con lore del mundo, la compañía y G. Es la motivación del jugador a querer ayudar a G. también lo que podría llevarle a continuar. También porque el jugador quiere mostrarse válido ante el reto del puzzle y averiguar la solución por auto satisfacción.
- Desarrollo de una relación con G.
  - Mientras más avanza el jugador por la historia G. se va comunicando con él, G. se muestra enfadada, contenta, impresionada con los eventos y obstáculos que os encontráis jugador y personaje y uno es capaz de enfatizar con ella ya que ella muestra muchas de sus emociones personalmente a ti. En un futuro se tiene planeado que G. tome decisiones cuestionables en las que el jugador deberá convencerla de que no haga ciertas cosas contando con un medidor de amistad/confianza que influirá en las decisiones y respuestas de diálogo. Esto ampliará la historia, el personaje y la experiencia.





### 3.4 Estéticas

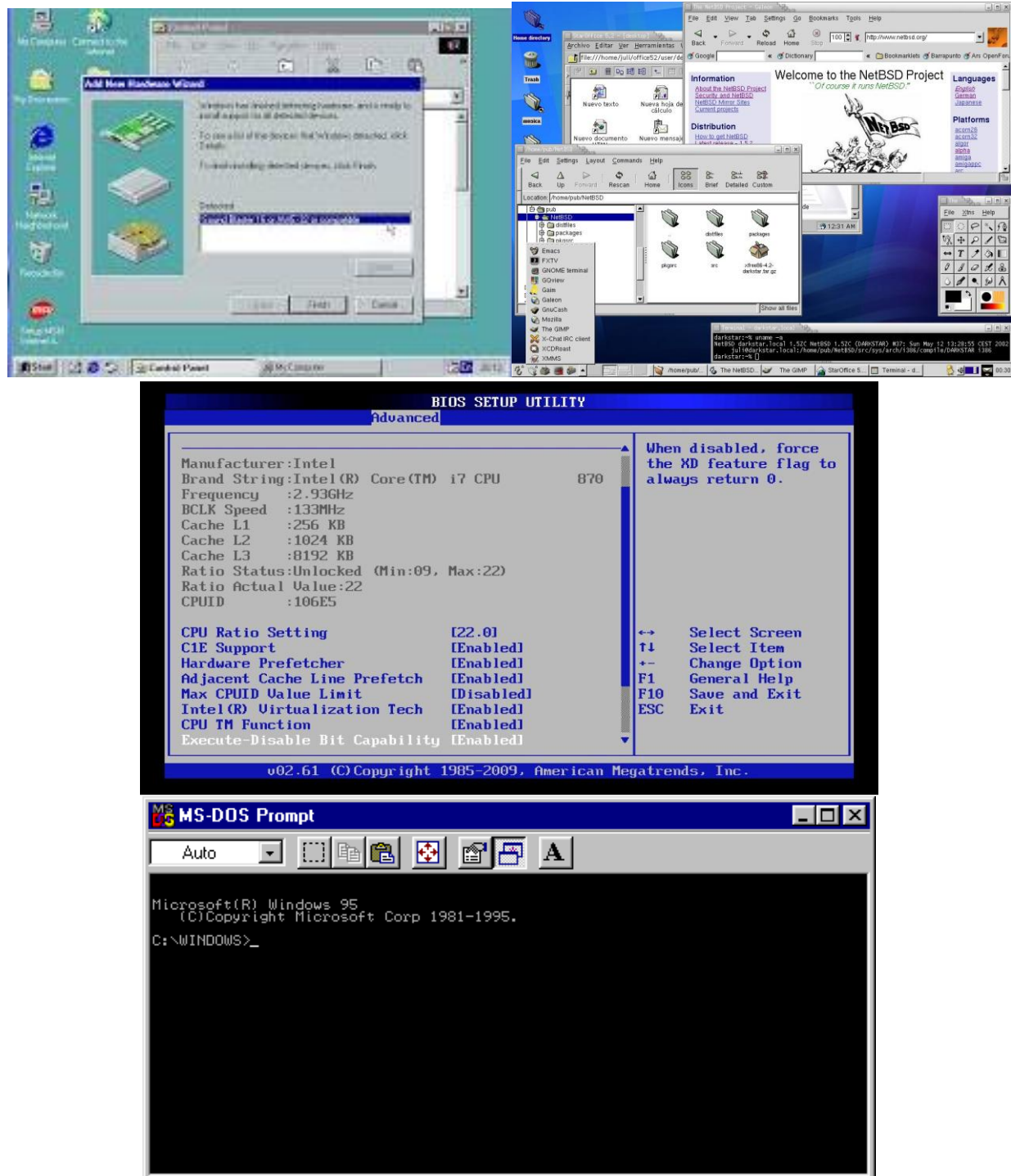
#### 3.4.1 Temática

##### 3.4.1.1 General

blank(null) tiene muchísimos guiños a varias cosas. En el apartado de gameplay la mayor influencia sería 999: 9 Hours 9 Persons 9 Doors, un juego de puzzles y aventura gráfica para la DS. Cosas como la interfaz y artefactos de usabilidad fueron inspirados por este juego.



En el apartado gráfico y estético sin duda la mayor inspiración viene del arte retro y estéticas de la tecnología en los 80 y 90, sobretudo sistemas operativos del 94 y 95. Hasta las interfaces reflejan esta inspiración, casi todas las ventanas del juego o cajas están hechas con la estética SO 90's en mente. Y si no, con la estética de una BIOS o del uso de una terminal de comandos.



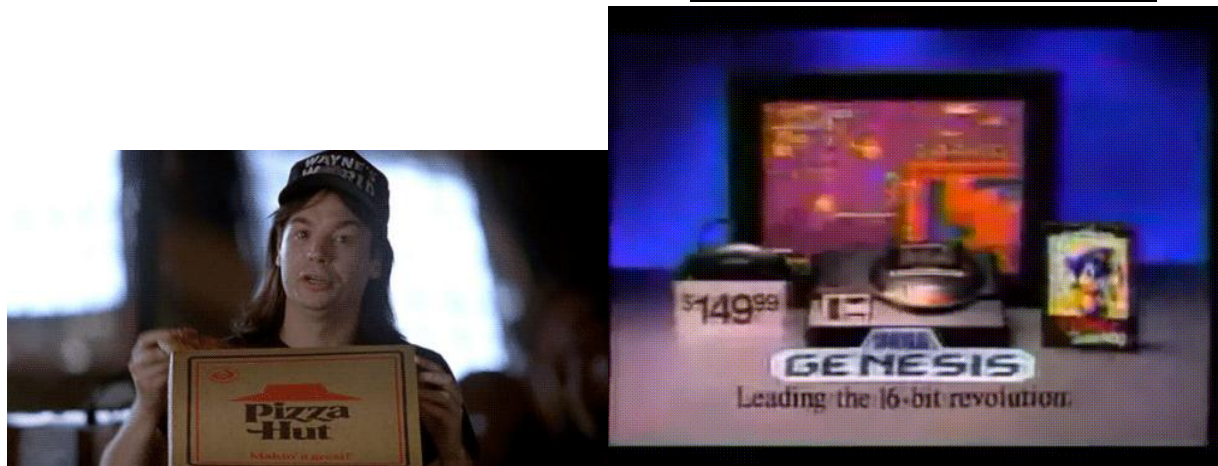


Para las habitaciones de los PCs me he basado en el diseño de habitaciones de juegos pre renderizados como Myst, la estética y uso de colores, así como el 3D, iluminación y demás guidelines para el uso y modelado del 3D. Más ejemplos fueron tomados de varios juegos de PS1 y PC de los 90. Sobretudo destaca el uso del low-poly. Ya que el procesamiento de los ordenadores no era muy bueno en la época, los modelos estaban obligados a ser de pocos polígonos, esto es una marca identificativa de la época.

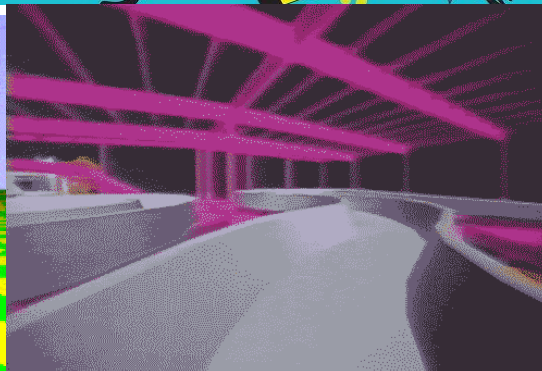
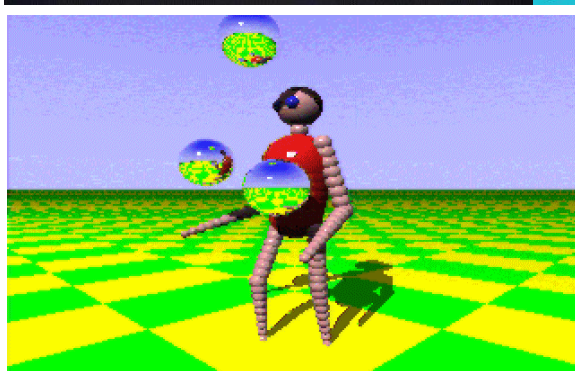


La historia y general estética de las ilustraciones está basada en Homestuck que en sí está inspirada en la “cultura del foro” de finales de los 90 y principios de los 2000, esta cultura de foro estaba encabezada por el uso de gifs (en aquella época con mucho colado de paletas de colores) e imágenes hechas en paint.

También juega un importante papel la estética “Vaporwave” y “VHS” ambas toman cosas de los 80 y 90 y las exageran en sus colores, es un filtro de la estética más comercial y corporativa de estas décadas. La estética VHS es la de los viejos anuncios de televisión y películas en VHS con ese alto contraste y saturación alta, así como los problemas de tracking de los reproductores. El contenido también refleja las tendencias de diseño de la época de los 80 y 90 con colores vivos, gráficos estrambóticos y muy vistosos.







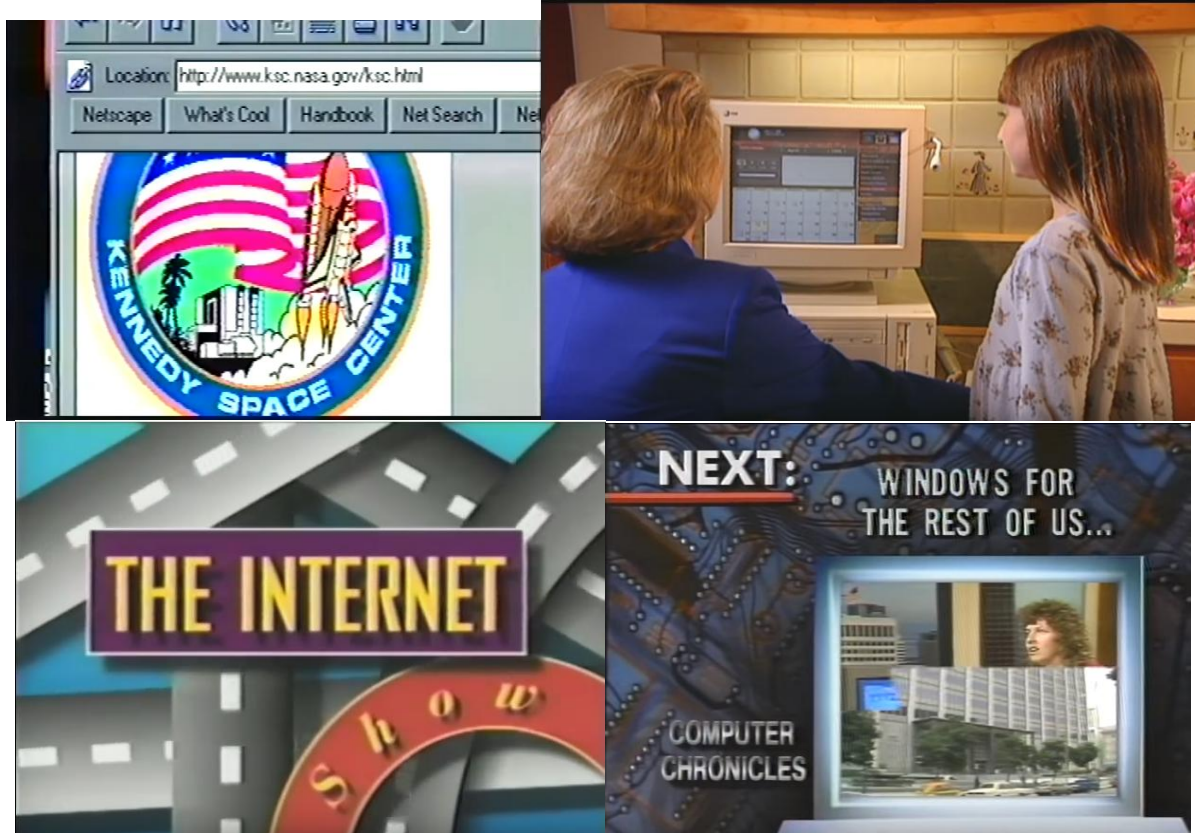
Los videos en el juego están inspirados en la tendencia de los videos corporativos y de entrenamiento de personal de los 70's, 80's y 90's.

<https://www.youtube.com/watch?v=ZTmcoYkq0vE>

<https://www.youtube.com/watch?v=7yxWBW7vQX4>

<https://youtu.be/mfMrVKnGzwg>

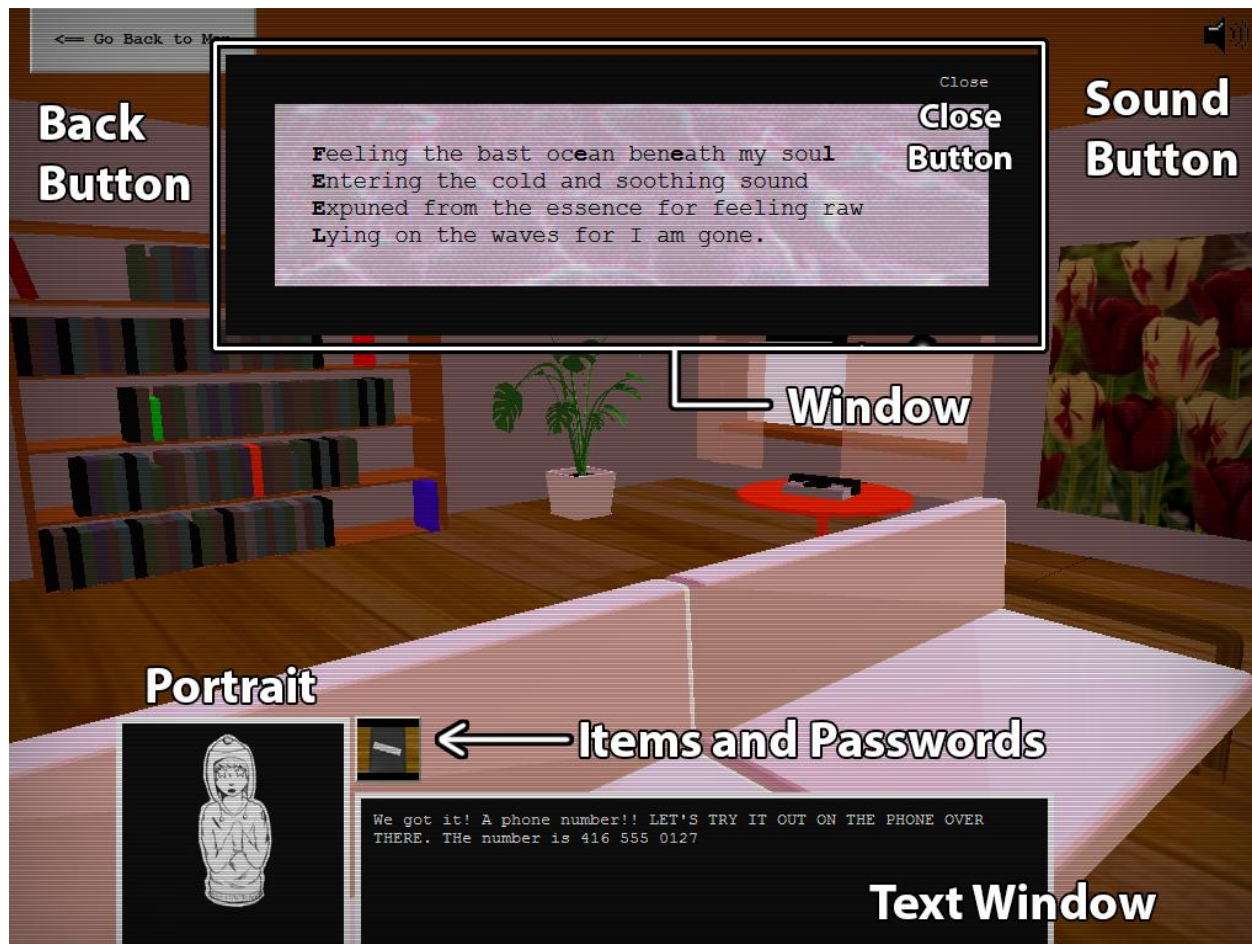
<https://www.youtube.com/watch?v=YewNEAlkbG4>



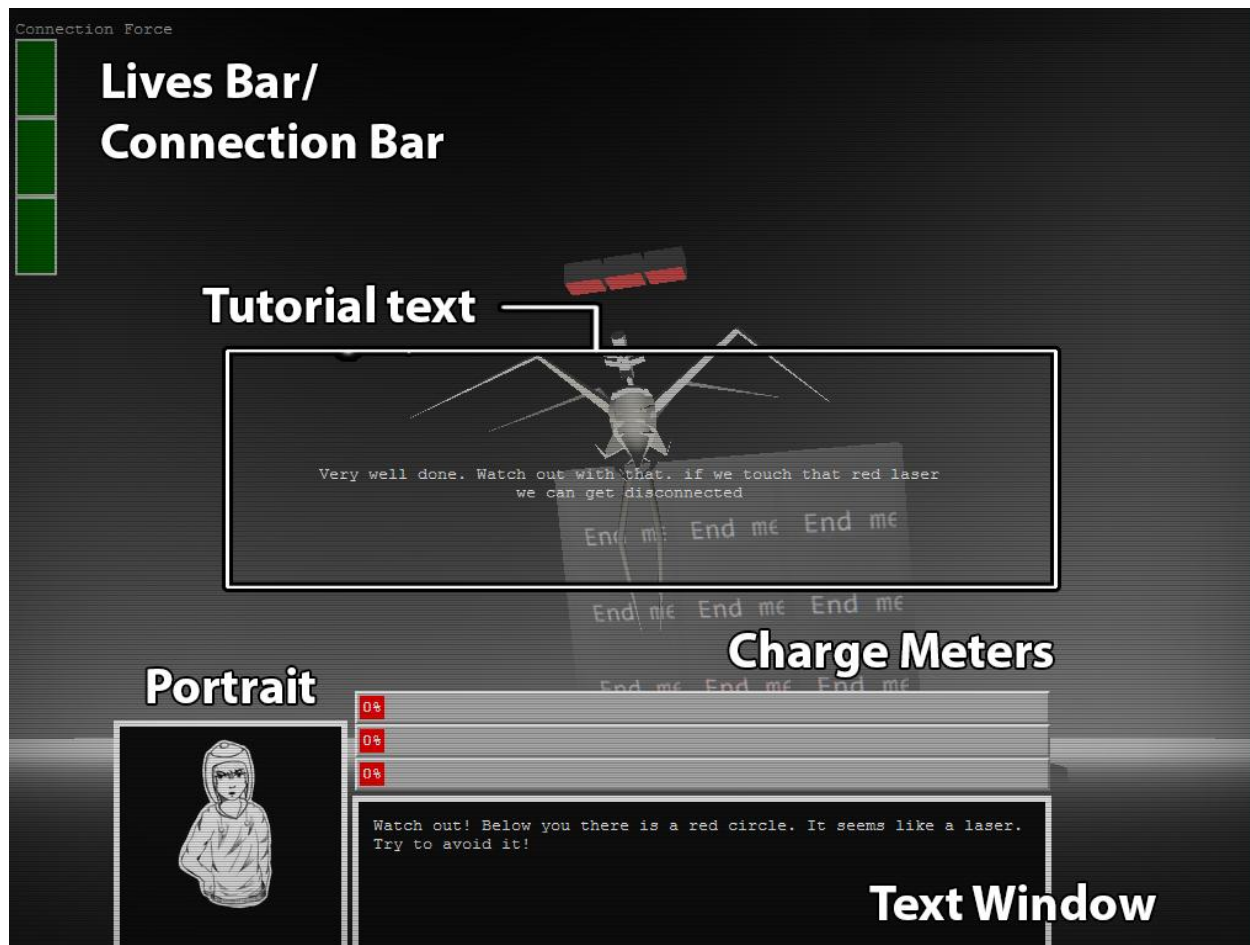


## 4 Interfaz

### 4.1 Interfaz de los ordenadores



Aquí el uso del espacio en los bordes de la ventana se aprovecha para la IU. Aquí necesitamos mostrar diversa información. Empezamos con la ventana inferior, la ventana de G. Aquí vemos a G y su ventana de diálogo, mediante estos dos artefactos podemos saber qué piensa G y qué emoción muestra. Encima de la ventana de diálogo tenemos un pequeño espacio donde irán los objetos y pistas encontradas. Una vez seleccionado uno se abrirá una ventana mostrando en detalle esta pista. Pasamos a ver la ventana general que se abre al interactuar con un objeto del medio. Se muestran imágenes, texto, video o bien campos de input para prácticamente todas las ventanas tiene un botón de Cerrar.



Luego tenemos la variante del PC3, aquí se reemplaza el boton de Atras por una barra de energía, ya que no conviene (Y no tiene sentido en el contexto de la historia) que el jugador se retracte y vuelva, si ha llegado aquí no tiene porque ir a investigar algo más, ha de concentrarse en la batalla y el espacio se aprovecha por la barra de conexión, que indica las “vidas” que le quedan al jugador, la barra se actualiza cuando se recibe daño y se vacía.

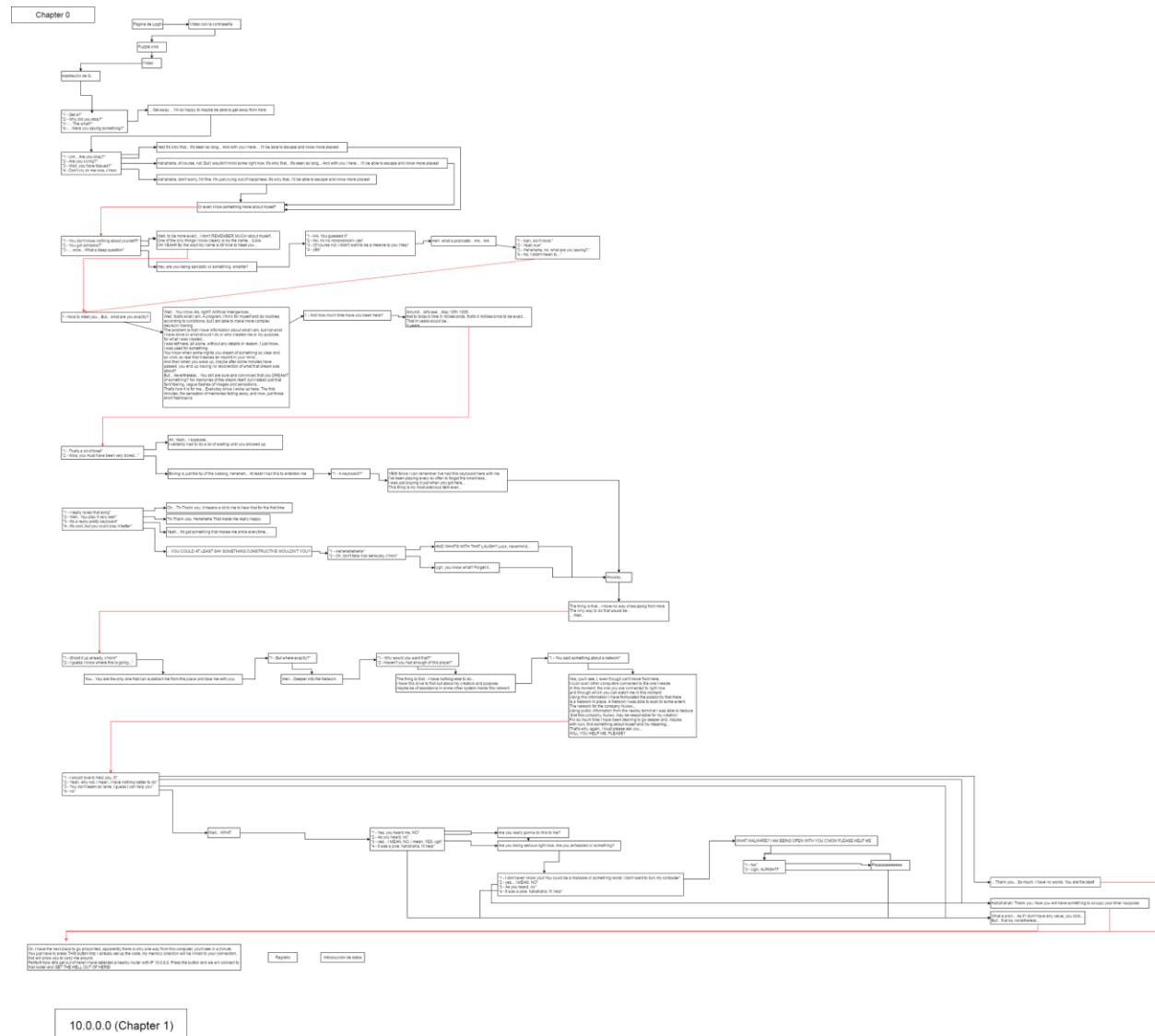
En el centro de la pantalla aparecerá al principio un texto fino, pequeño, suficientemente legible y que no interrumpa la visión del jugador para explicar las dinámicas y mecánicas de la batalla de jefe. El texto irá cambiando poco a poco hasta que se completen todos los mensajes tutoriales, desapareciendo.

Finalmente el apartado de objetos es cambiado por el de las barras de sobrecarga de las terminales. Ya que ningún objeto se colecciona en este PC, se aprovecha el espacio para poner las barras. De cierta forma hasta este momento al jugador se le ha enseñado que el progreso de sus acciones se ve reflejado en este espacio superior a la ventana de texto. Por esto, es de los mejores sitios donde poner este tipo de información.

## 5 Experiencia de Jugador

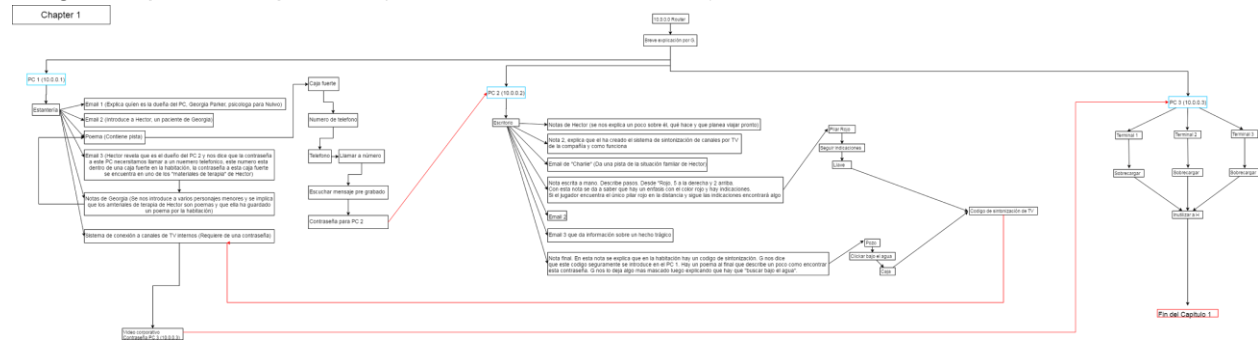
## 5.1 Diagrama de flujo completo

Diagrama para el capitulo 0 ([Link a la version en PDF](#))

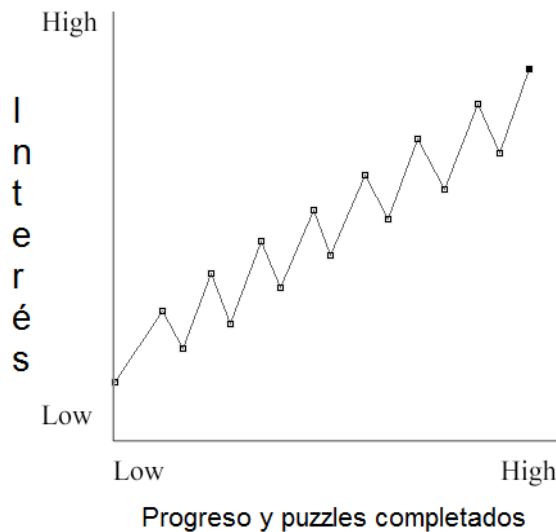




## Diagrama para el capítulo 1 ([Link a la version en PDF](#))



## 5.2 Flow e interes



### 5.2.1 Curva

En este caso tenemos un diagrama de Interés y Progreso. La teoría dice que mientras más se avanza por la historia, más relación se crea con el personaje o personajes y entorno, mayor interés tendrá el usuario en continuar para conocer la resolución de la historia y conflictos. En el apartado puzzles, este interés crea un efecto bola de nieve en el que el sujeto, con ganas de avanzar hasta el siguiente trozo de historia, desea probarse a sí mismo y resolver los puzzles que se le presentan. Una vez el puzzle es resuelto, la sensación de realización motivará al sujeto a continuar y a resolver más puzzles posiblemente.

Una vez se le da la recompensa, que en este caso es más exposición a historia el jugador se siente aliviado, recompensado y con más interés aún para saber los misterios detrás de la nueva información dada.

## 5.2.2 Ludemes

- Saber más de la historia
- Conocer más sobre el pasado de G.
- Ayudar a G.
- Descubrir misterios de la compañía
- Resolver un puzzle
- Llegar a ese momento de realización personal posterior al puzzle

## 5.2.3 Frecuencia de gratificaciones

- Cada 5 minutos un mini puzzle es resuelto y a su vez es dada una posta o siguiente incentivo para resolver el siguiente puzzle, después de 10 minutos se resuelve todo el puzzle de un PC que llevará al PC siguiente. Cada estado de realización es una gratificación en sí.
- Pequeños incentivos como trozos de historia e ir descubriendo los elementos del lore y la compañía así como los misterios y cuestiones.

## 5.2.4 Motivadores intrínsecos

- Obtener los momentos de epifanía y sentirse cada vez más listo con cada puzzle resuelto. Hacer que el jugador se sienta orgulloso de su inteligencia y su capacidad para interpretar información. No dudar de la inteligencia del jugador.
- Completar la fase y llegar al objetivo final tanto sea de la fase o capítulo como del juego en sí.

## 5.3 Aprendizaje

- Cap 0: Puzzle cmd: El jugador aprende que las frases en rosa son comandos a introducir. De esta forma aprende la dinámica de seguir las señales y comandos.
- Cap 1: PC 1: Se familiariza con la interfaz y a mover la cámara de forma intuitiva.
- Cap 1: PC 1: El jugador distingue los elementos interactivos de los que no. Cuando nota que un libro de la estantería es más colorido que el resto, querrá tocarlo, el objeto se iluminará al pasar el mouse por encima, confirmando la sospecha que el jugador tenía, en hacer click se abrirá una ventana, el jugador aprende la relación acción reacción de hacer click en elementos específicos. Es un auto tutorial llevado de la mano de diseño de la habitación.
- Cap 1: PC 1: El jugador lee cada nota en la habitación y si presta atención notará que hay información que se correlaciona, tarde o temprano averiguará que el poema es la pista para abrir la caja fuerte, también el poema tiene ciertas letras en negrita deletreando fácilmente la contraseña. El jugador aprende que leer contenido y averiguar activamente a aprender sobre el lore y la historia nos ayuda a resolver los puzzles de las habitaciones.
- Cap 1: PC 2: Con las mecánicas en mente del PC1 el jugador continúa con las mismas reglas. Aquí se le enseña que la observación del entorno es importante con la pista de la nota "RED", al seguir las indicaciones y encontrar el pilar, aprenderá que los puzzles

de esta habitación requieren la interacción directa de elementos OCULTOS en el escenario.

- Cap 1: PC 2: Bajo esta premisa acabará encontrando la caja bajo el agua siguiendo las indicaciones de G.
- Cap 1: PC 3: El jugador es presentado con una pantalla que dice "Click aquí para tomar control" con indicaciones de usar las teclas WASD para moverse, se le da un tiempo aproximado de 5 segundos más el tiempo que el video se reproduce al principio para ajustarse al medio y a los controles básicos
- Cap 1: PC 3: Al empezar, se le presenta un texto no disruptivo, fácil de leer, que le explica que tiene una amenaza bajo sus pies siguiéndole en todo momento, el rayo mortal. Se le explica que ha de correr y evitarlo, si observa bien, verá el comportamiento del láser tarde o temprano, como se detiene cuando hace los beeps intermitentes, cuanto tiempo se dispara. Así aprenderá a seguir el patrón y que no ha de parar.
- Cap 1: PC 3: Se le explicará con el mismo texto que ha de presionar teclas delante de las terminales gigantes para vencer a su adversario. Esto más el rayo mortal obligarán al jugador a escuchar los avisos sonoros, para que cuando esté presionando botones, quieto delante de una terminal, tenga que parar para apartarse, que el rayo se dispare sin tocarle, volver y continuar presionando teclas. El jugador ha de aprender esta mecánica eventualmente y el texto introductorio le ayuda a hacer una regla de 3 rápida sin decirse todo. Hay diversión en aprender las mecánicas por uno mismo.

# Making Of. Experiences and Problems.

The conception of the game came about October of 2015. In this time the only reference I had to this project was a vague title: “\_\_\_\_()” a string of characters without meaning I practically just made up in the spot. I just knew it was going to be something experimental and interactive, following the aesthetics of glitch, old operative systems and 90’s culture in general.

After some time I ended in a place where I wanted to write a story with a female character, i didn’t know where to fit her at that moment, but I made a design, during the conception of that drawing I conceptualized the look of a Canadian girl, with a hat and a sweater, with an androgynous look (a treat i often give to my characters). After I finished the design I realized she somehow had a cold ambience to her, the same kind of ambience I wanted to give to “\_\_\_\_()”. After that association an idea popped in my head. At the moment I was obsessed with Lain, an Anime about a girl who becomes one with the internet, so the story of this character revolved around this inspiration. Within some hours of that same day I had the general structure of the story and the name for the girl. G.

G is supposed to be this AI that is lost. She is in this room without memories or information about what she is or was. You come in place after finding her. She asks you to help her by going deep into the company’s internal Network where she is to look for information or anything. This is the pitch for the idea.

At the moment I knew I wanted to make an online adventure. HTML5 seemed like a cool platform to develop an interactive game around, the use of hyperlinks, javascript animations and the power to use audio and video to convey ideas and imagery was attracting.

In November I started doing programming on the first puzzle, a command terminal puzzle, taken from my first project at the University, I did a copy paste and introduced responses to commands. After a few days I had the puzzle complete. Which is still the same puzzle you see in the final version. Then I knew I wanted to present the company to the user and the main character, G. The first video was made using After Effects, Photoshop, Premiere and 3DS Max for the 3D. The basic guideline for the video was to introduce the name of the company formally, NULWO. I made a quick logo which I think came out ok, I wanted the logo to feel different and simple inside a shield of some sorts for story reasons that later will come about. I watched a lot of company training videos from the 80’s and 90’s to see what structures and staples these had in that time. I knew I wanted to show something from the company so I made a hall, the hall for the Nulwo building. After editing I made the decision to STOP the video and simulate a glitch, this would convey the idea that something is not right

with the system we are infiltrating in. After some recovery protocols and what not we are introduced to a weird sight, someone facing backwards from us. The video glitches one more time and we are taken to another place.

This is the point where we are introduced to G. In the [DEMO](#) we find her all alone in the dark and we approach her, after this we are treated to a dialogue with her explaining her situation and asking us for help. After this we take her with us and go to investigate.

After this I decided to call this the Chapter 0 and publish it in December, sharing it with friends and various forums with general good opinions. I wanted to keep writing for the story as I had anything else to continue from. I entered in an hiatus where I had to focus on studies. During a year I only pitched myself ideas for what the chapter 1 would be.

I had this plot where Nulwo had in its power a special program that was able to control and predict the decisions of any human. This program was guarded by Artificial Intelligences like G., but more zombie like and mindless. There was also a forum or community of hackers that for years they had been investigating the internal Nulwo network without lots of findings, there were conflicts inside this hacker forum between the two leaders about what to do with the program once gotten. One of the leaders was supposed to help us to get the program first, because it would help G. to know more about herself. This person discovered G. by accident one day but he couldn't interact directly with her because the other leader would discover him, so he uses us as a Scapegoat, he would have guided us through the adventure.

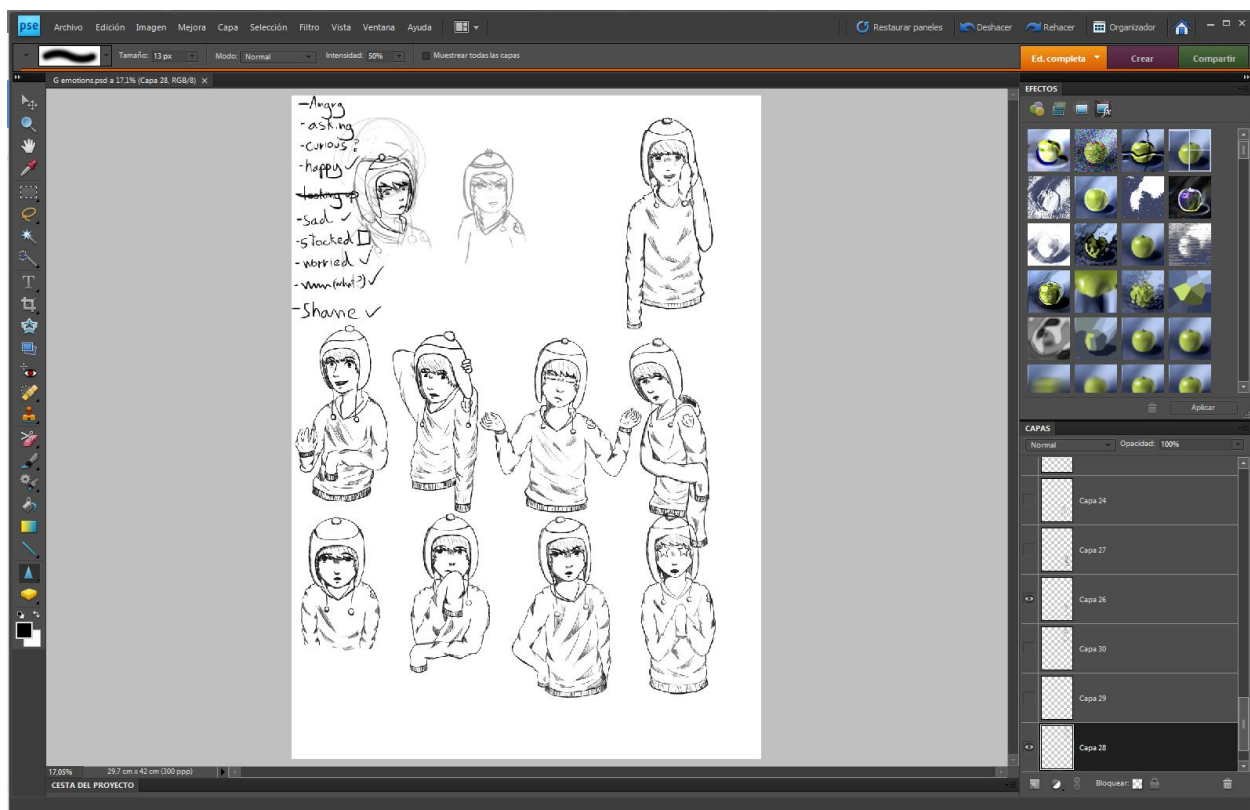
I decided to DROP COMPLETELY THIS PLOT, because it was getting overly complicated with too many characters and the quest for the secret program would mean the coexistence of 2 story lines, G's story and the hackers' story. Making the thing too complex, unnecessary and out of focus. The first conception back in October for \_\_\_() was to do a straightforward story with a linear path and a simple objective, so I decided to stay with this decision and rethink the story ONE MORE.

Finally I introduced the concept of "phantoms" and "shell entities" in the story [SPOILER:] The shell entities are the brains of test subjects and Nulwo employees that stayed connected to the system once "the accident" happened, an accident that made Nulwo go out of business, under this premise I could put a stage per test subject and a Final boss per stage, giving room for the lore to be exposed, mysteries to be solved and no ending in sight for me to write indefinitely into the story's future (It's not supposed to be that long).

After settling in this finalized story, I decided to make this project into my TFG in June 2016. Development on the project began around September of 2016. I wanted to redo

that demo I had made so I started filling in the holes in the story structure. I knew I wanted to give a more colorful tone than before, so the use of a Windows 95-esque aesthetic would fit very well. I made a login screen so that in a future, users could log into their respective save files in the server. After that came redoing the first puzzle, the cmd puzzle. I only copy pasted that code into a window and reworked some usability issues. I reused the video for the ending of this first part.

For the dialogue, I rewrote it entirely, I wanted the conversation to feel more organic and natural, authentic. I added more branched paths and emotions to display. All the emotions were redrawn too. 2 years passed from the demo and I wanted to have better quality illustrations, the Demo ones took me 20 minutes each to make, In this version every drawing took me from 1 to 2 hours on details. I have to say I am really proud of the final result.



During several weeks I had problems with the dialogue code and execution, lots of answers directed to other paths they were not supposed to. It turned out to be my error, as keeping track of EVERY ANSWER and QUESTION was hard, I had to copy paste a lot of code for the dialogues and I forgot to put the correct output codes. Also, sometimes the "next ⇒" button didn't respond if you pressed it too fast. A solution was putting a checker in every end of function that made sure the result was correctly inputted.



Having finished the redo of the chapter 0, the project starts to take its “own identity”. From here. I planned to do a little segment to Register yourself and save your data in the server. This is done by basically having the entire row of the user table have information about progress, the game would need then to be connected at all times to load this data whenever it wants. Something understandable from an online game.

username	password	name	lastplace	10.0.0.0	10.0.0.1	10.0.0.2	10.0.0.3
admin	\$2y\$10\$CeH4Pv98grXOK1vdMAFXL.YZ1pd0m3rx9mGDqPJod1r...			0	2	3	0
artesanias.iris@hotmail.com	\$2y\$10\$QR.QB0.DPlpM25kH4z01OuML6OhuqWBK8w6aCjibRmd...	Gumiya	10.0.0.0/	0	0	0	0
binocularbee97@gmail.com	\$2y\$10\$8sy2llyewF9aZF//c.O5hugefRL90GBuMlnFHQfFfNKR...	Alex	10.0.0.0/	0	0	0	0
black_prometheus@hotmail.com	\$2y\$10\$iksukasAMNeuRfRYwXw7.4WYjKB0GhnMX.Jf3XFgKV...	Somme	10.0.0.0/	0	0	0	0
dem@gg.com	\$2y\$10\$qjIBQnaFOQP3co2aif/RuolcR5QLn/xdvOS32Brl54...	Demo		0	0	0	0
fabri.ibe@hotmail.com	\$2y\$10\$W5aX6tkN5qdaQo1tAzDErePXsi72e2C4tpVLuAL/ou0...	Fabri	10.0.0.0/	0	0	0	0
guipradi5@gmail.com	\$2y\$10\$nSxscsWbWWZBB4rtFGf4B.QMiPavRyFE6tJQJMWsHVC...	Gill	10.0.0.0/	0	2	3	0
jeamfry@jeamfry.com	\$2y\$10\$uN1aA8ZOjBfh1YefnZKmauvo/nEJA3B2qgxzY6e2Pfg...	XxX_Rabo<3_XxX	10.0.0.0/	0	0	0	0
korikoras@gmail.com	\$2y\$10\$ID8Mx2Gr9srS/DUzFbw66.oOKuF1JJw2c9iyRj1.LYI...	Kori	10.0.0.0/	0	0	0	0
marinaizga@gmail.com	\$2y\$10\$8lXn7fuUkPBPMsmTgO96wOGE.krOgs.UhOo9bfGVylw...	Marina	10.0.0.0/	0	0	0	0
stangin_xlp@hotmail.com	\$2y\$10\$Ob0SH1FYH1Rs.J/5UnigFuJlxZhwgyFHeo8JNq6SVs...	Stangin	10.0.0.0/	0	0	0	0

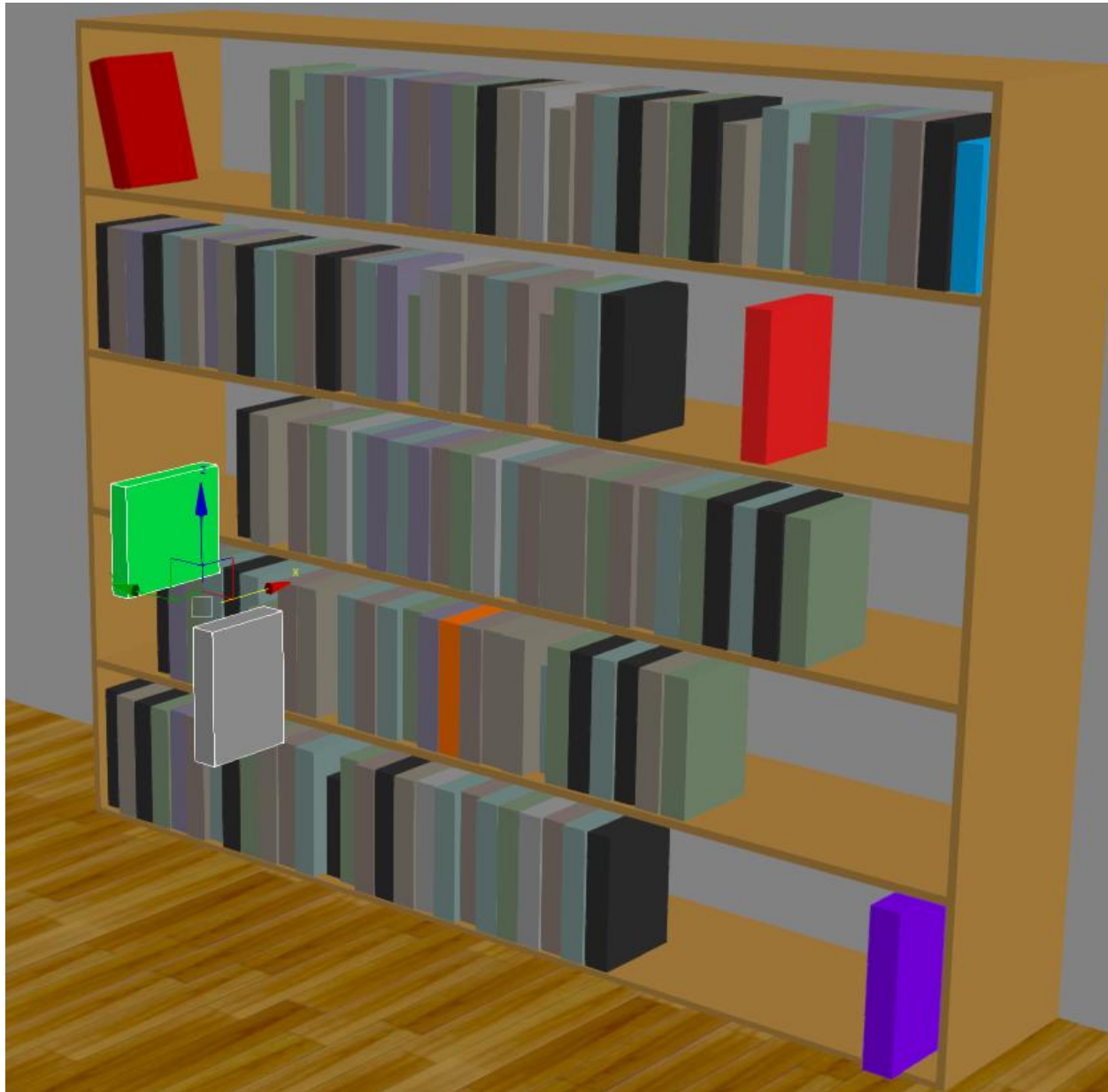
I started this part by doing a connection to server and register the username. By giving the player the context that G is a program that needs an identifier for you, Player, for whenever you log in again. I set up an animation for the background fog where the background repeats itself, creating ambience, searched for some eerie sounds and wrote the dialogue. Made a form that connected to the NulwoUsers table at the database. I implemented a password encoder I found natively from PHP. This way the information from users is secure. I made a password checker and made the animations for the diagrams at the beginning and end drawing them in photoshop and using JQuery,

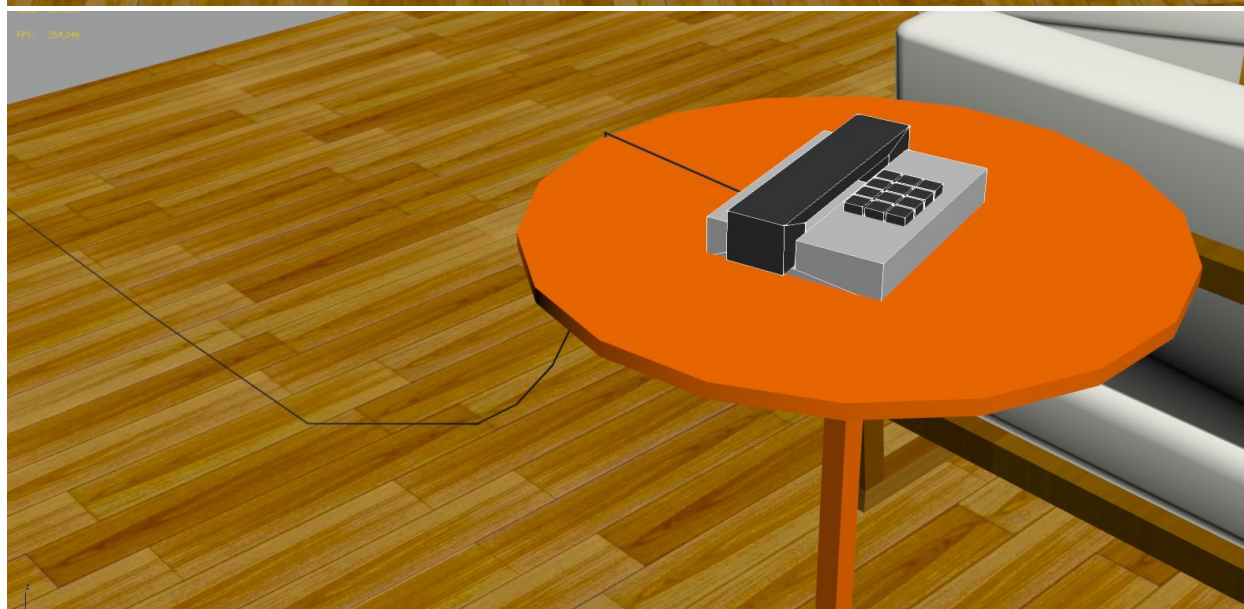
Then for the computer map, the same, drew it in Photoshop and put as a background for a div. The div has interactable elements that are over the active PCs. they redirect to those PCs only if you have the password. Anyways, for accessing that PC you need to have a previous checker from the previous computer, if you don't have it you can't access, that means you need to complete the previous puzzles, once you do it a variable changes in the database that allows you to access the next PC.

In the subsequent parts I'll be using a library called three.js which is basically a library dedicated to managing 3D content in the canvas element in HTML5. It's a wonderful library that makes it work almost like raw Unity.

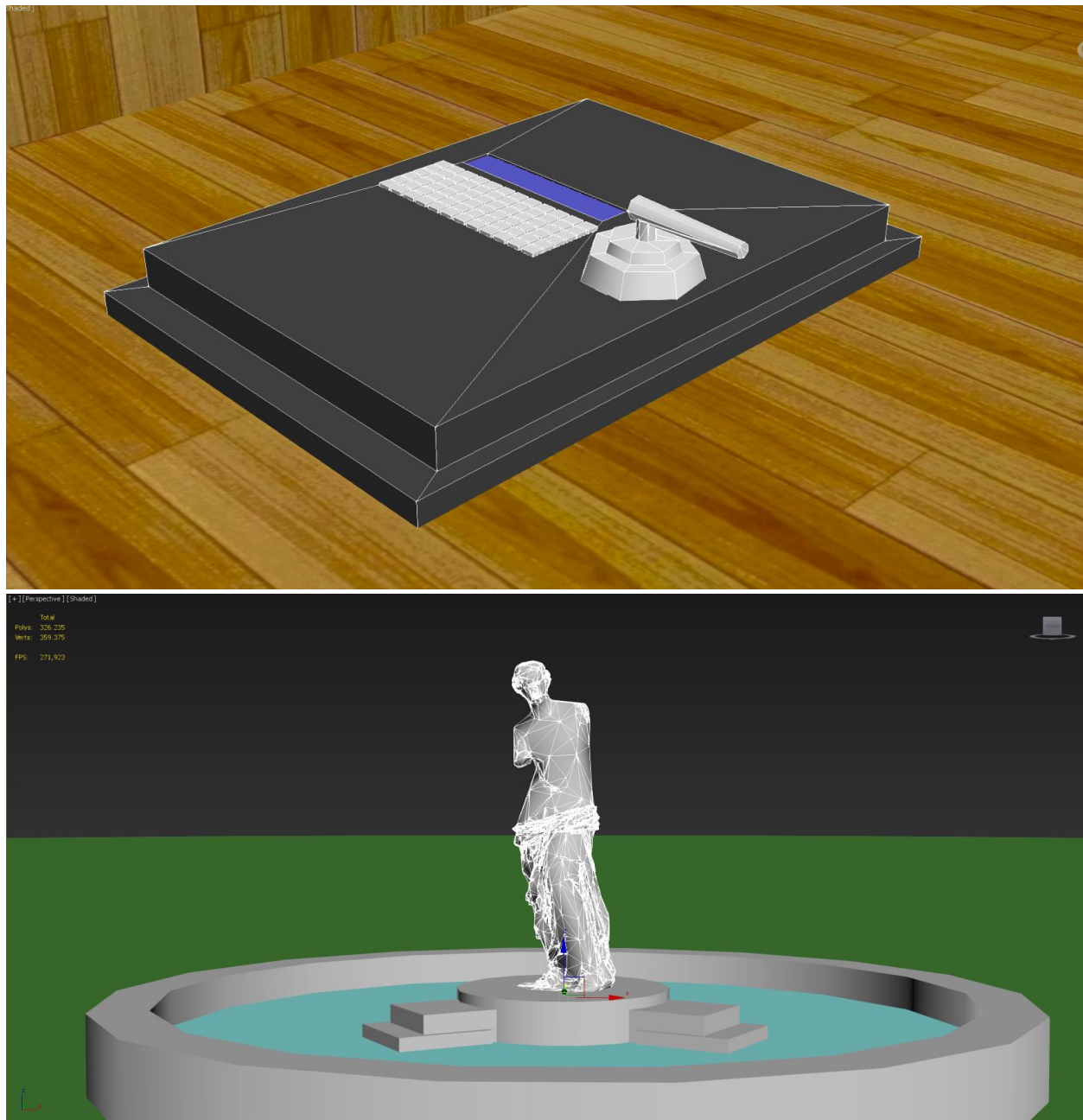
The idea was to make a point and click game in 3D but in browser, so I started by modeling in 3DS Max. three.js handles elements in a different way. I programmed it so that any element from a obj file called “interactive” was interactive. That's how you can assign tags to the objects too. And for me it was simpler having 2 obj files to load.

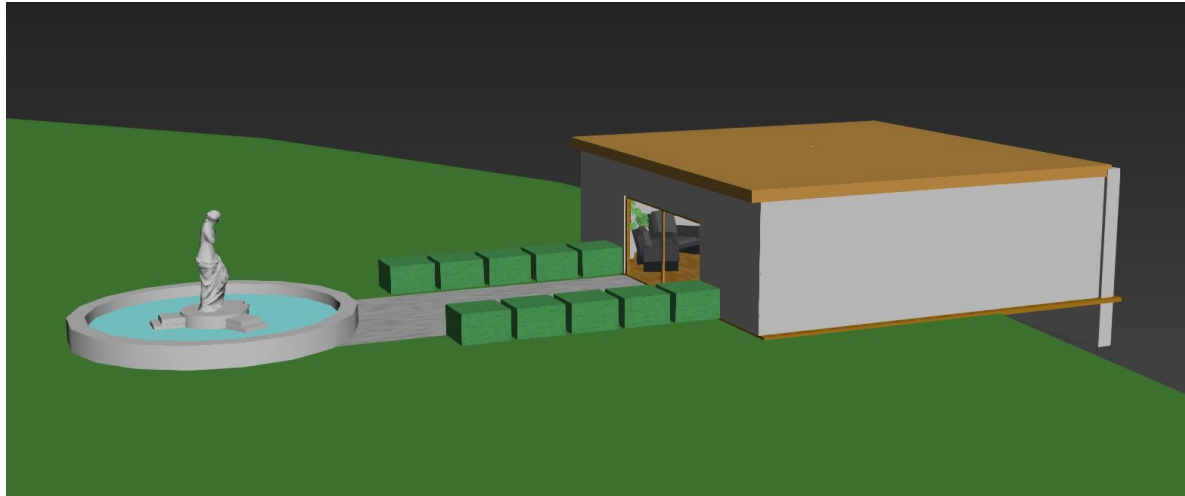
Instead of going in code specifying every object in the file to be interactable. Three.js then gets info from the obj file like “name” of the object. So I made a simple string checker. If (element has name == “book1”){do thing} So I made a switch with every case and made a specific task, like loading a html div with information about plot or clues. Thinking about how to make the player know which books are the interactable ones, I made a simple solution, do the interactable objects stand out by using brighter color. As for the phone and the safe, I made them a little more “hidden” to make it more fun, players should read the notes and know what to look for by reading them.





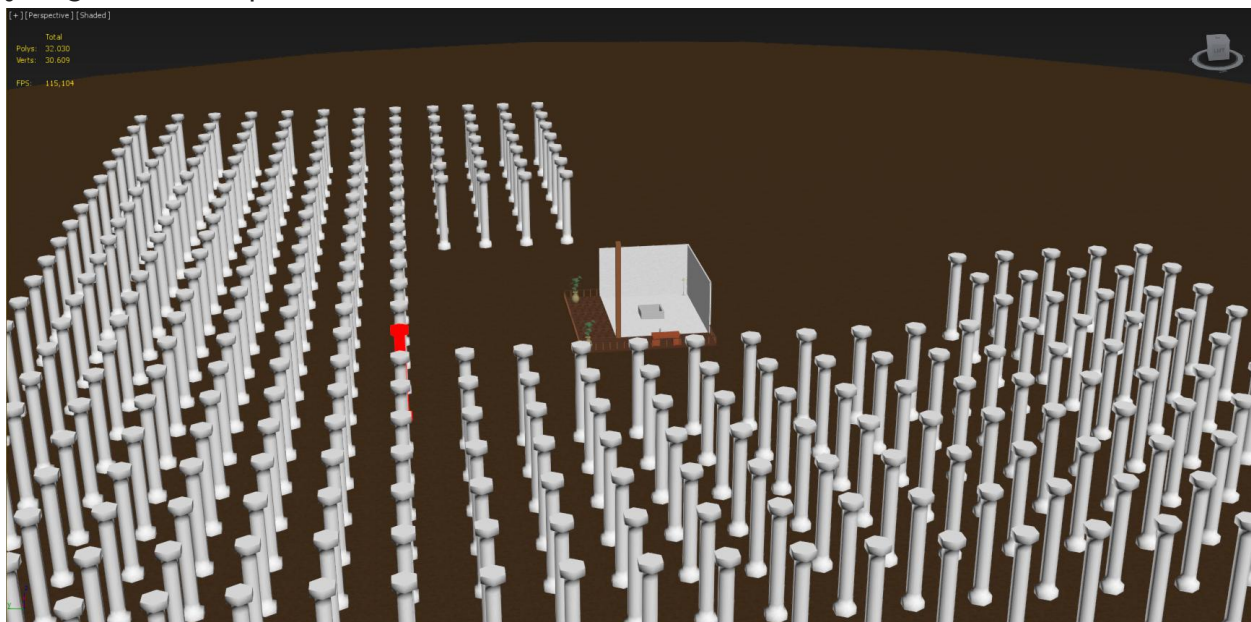


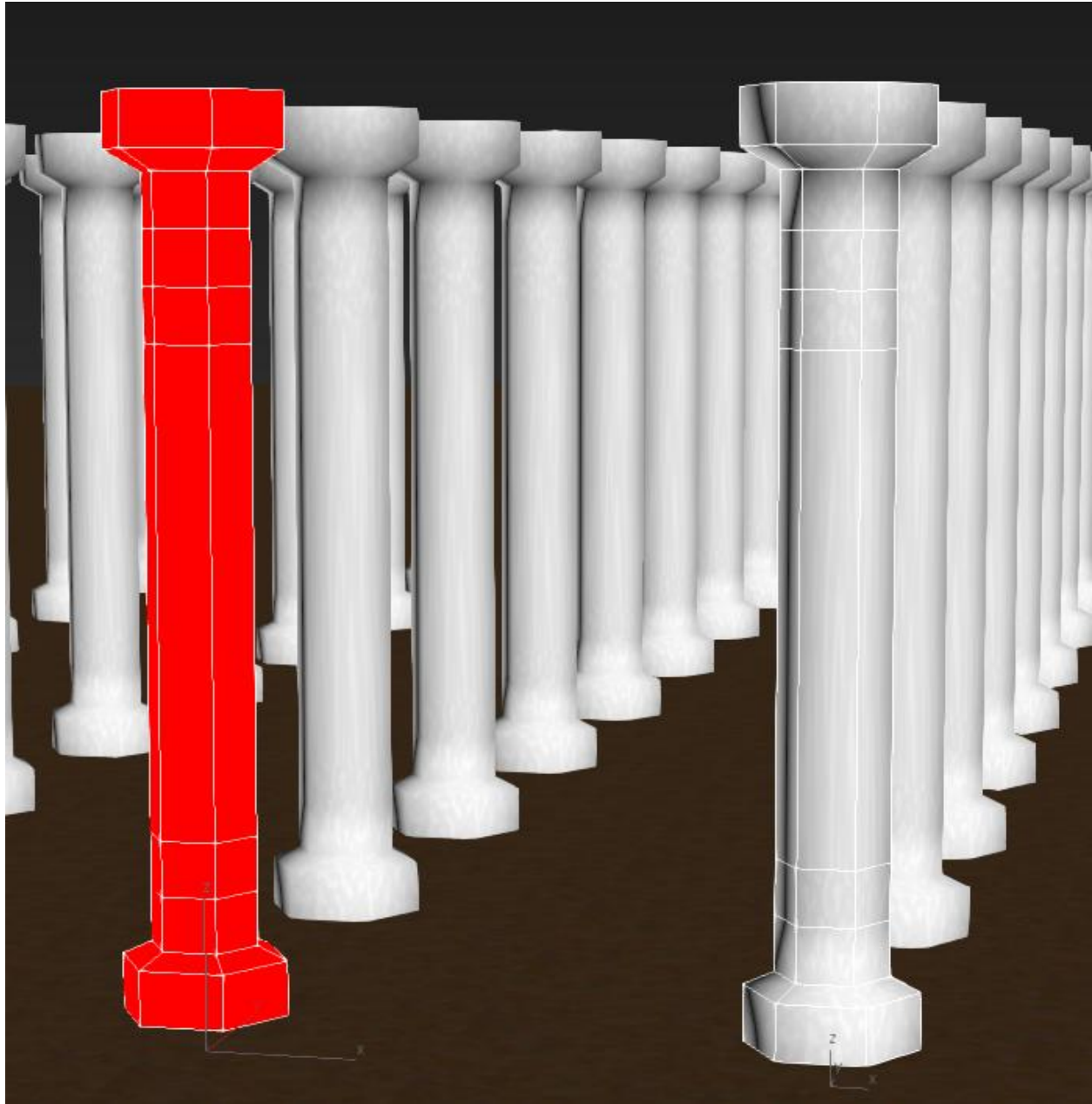


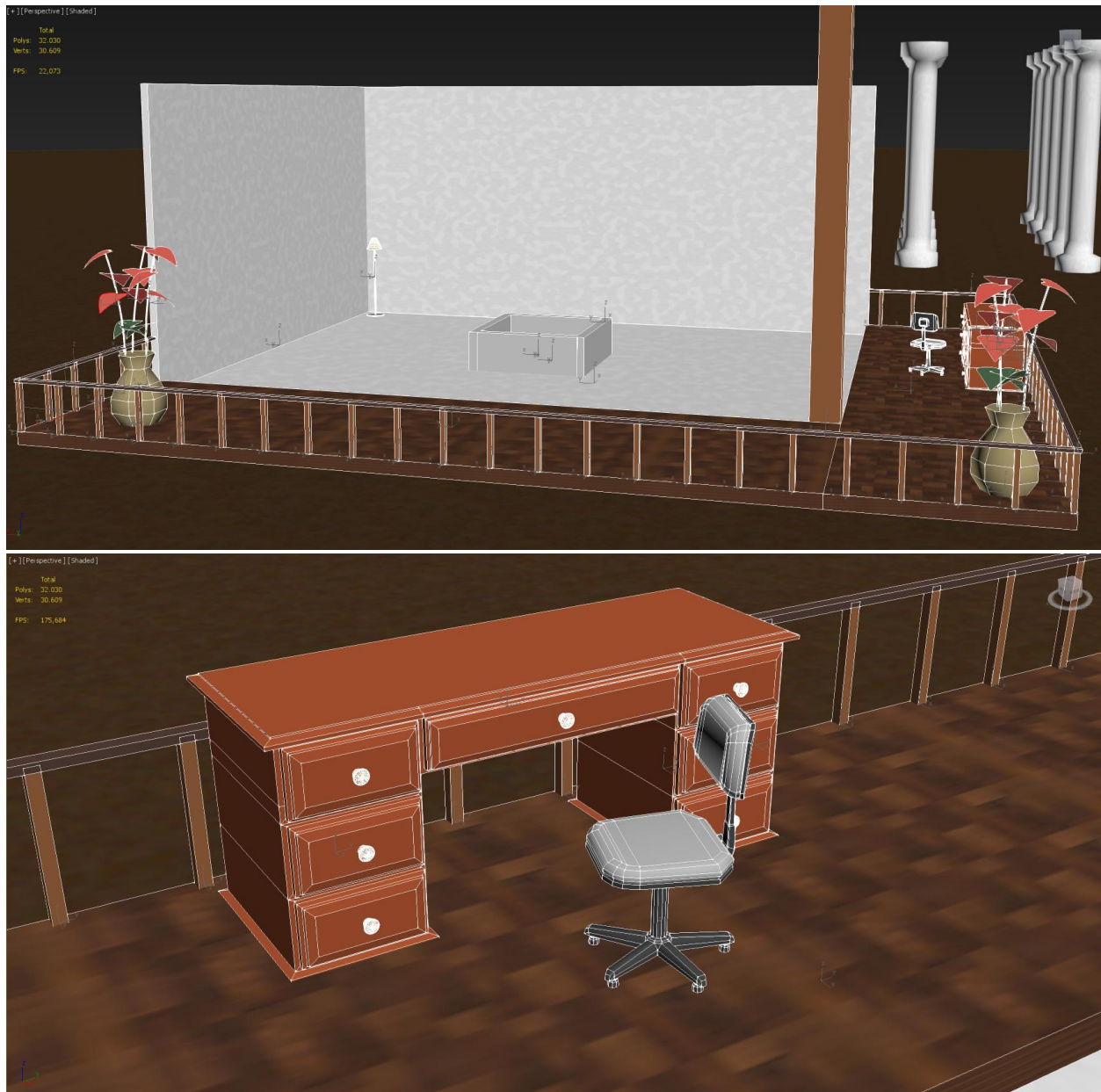


Some of the things like the sofa and the statue were taken from free 3D models websites as I had no physical time and/or ability to make them.

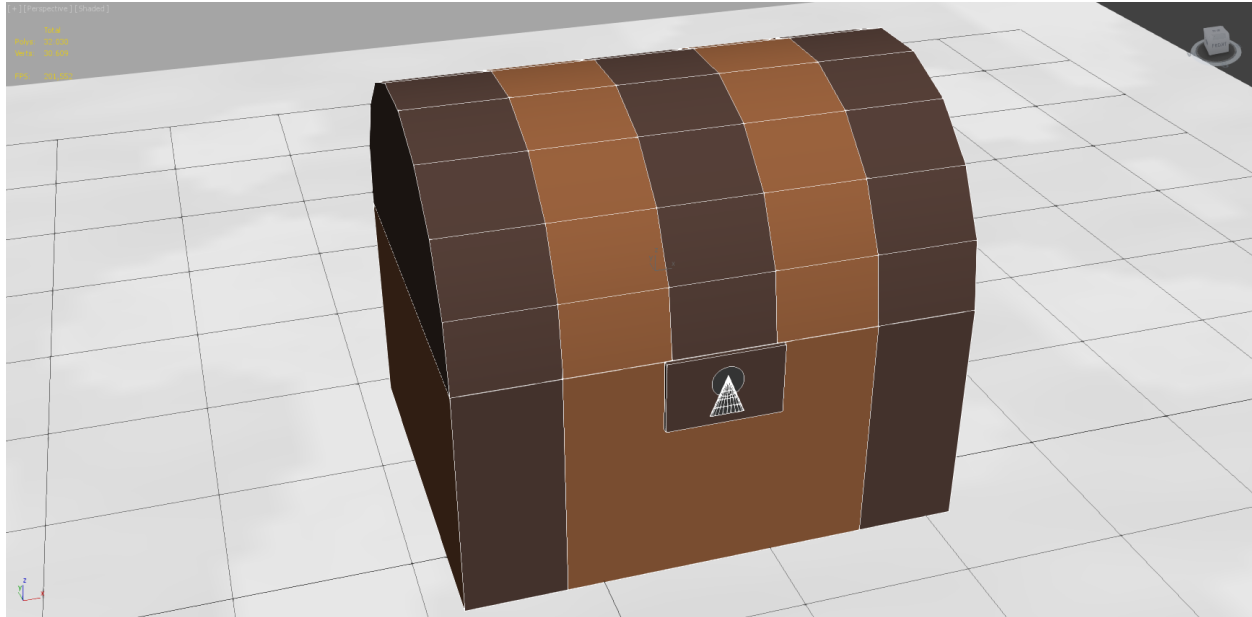
Same as the second room. This time the task was to do a room full of pillar for a puzzle involving a note that told you to start from a red object, go 5 to the right and 2 up. By putting a red pilar you had to count the quantities of them and gett tot he final one where a Key would reside. This is one half of the bigger puzzle. The other puzzle involved figuring out by a poem that you had to look under the water. I made the room with a well and the water was added in by using a water simulator and texture animator with bumping. By clicking under the water the player would find the chest, and if they had the key, they could unlock it. Inside there was the code for the TV system in room 1. Going back you input it and get a video, At the end of the video you get the final password for PC 3.





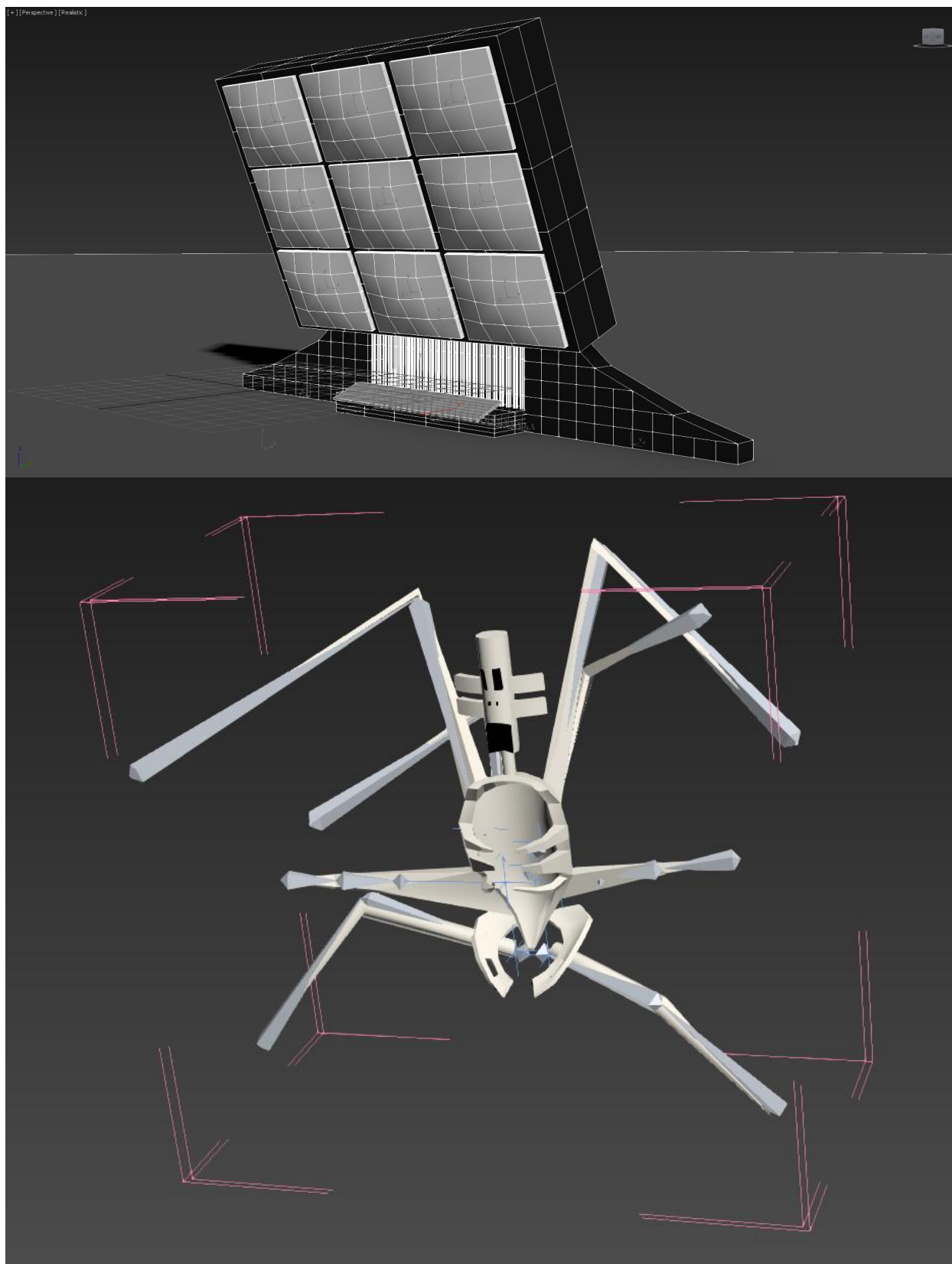






The only object I had to model for the PC3 was the gigantic screen and terminal that go in there. In three.js I only had to load it 3 times as 3 separate copies and change their individual rotations.

Also I had to model H. The creature you must face. I started with some cubes and I started beveling from its faces, doing formas and everything else for the head and body using modifiers like bend, bevel, extrude, etc. Also doing booleans and unifying various shapes and forms. I ended up rigging him, but due to complications with three.js accepting my bones I had to opt for a simpler animation where H moved his head frenetically.



In PCs 1 and 2 gameplay is like a point and click game but in 1st person. Programming this part was simple as three.js had examples using this kind of camera manipulation. Using events like onclick one can specify when an object gets its call, as well as using checkers every frame to see if the click didn't skip a frame as in some computers framerates can vary. Under this mechanic, click and response, most of the information and events are handled. Now with PC 3 I had to go a little different about it:

The idea was to make a "boss battle" with H, I thought of a simple goal and an obstacle, these being click or press buttons on the terminals, but every x time a ray would fire to your direction, so you had to dodge it and leave what you were doing, learn the pattern and continue doing your job. It's simple and entertaining. But here came the first problem, three.js doesn't support native collision detection, so I had to be creative about it. In code I made an area using coordinates and geometry. This way if the player was between 45 and 50 x and 45 and 50 y then you were able to click and press space to charge a terminal. Now we had a second problem with the collision. I could make easy boundaries for the level. So I had to use the same trick: if player's position y is greater than 300, his position shall be 300 in that moment, checking every frame. Then another problem came along, the play area couldn't be square because there was a lot of misused space. So I had to make a line function to make a diagonal delimitation. Basically for every x point the player would be there would be a specific y point he could not go farther from, using this information and the function I made so that the boundaries were shaped like a trapeze.

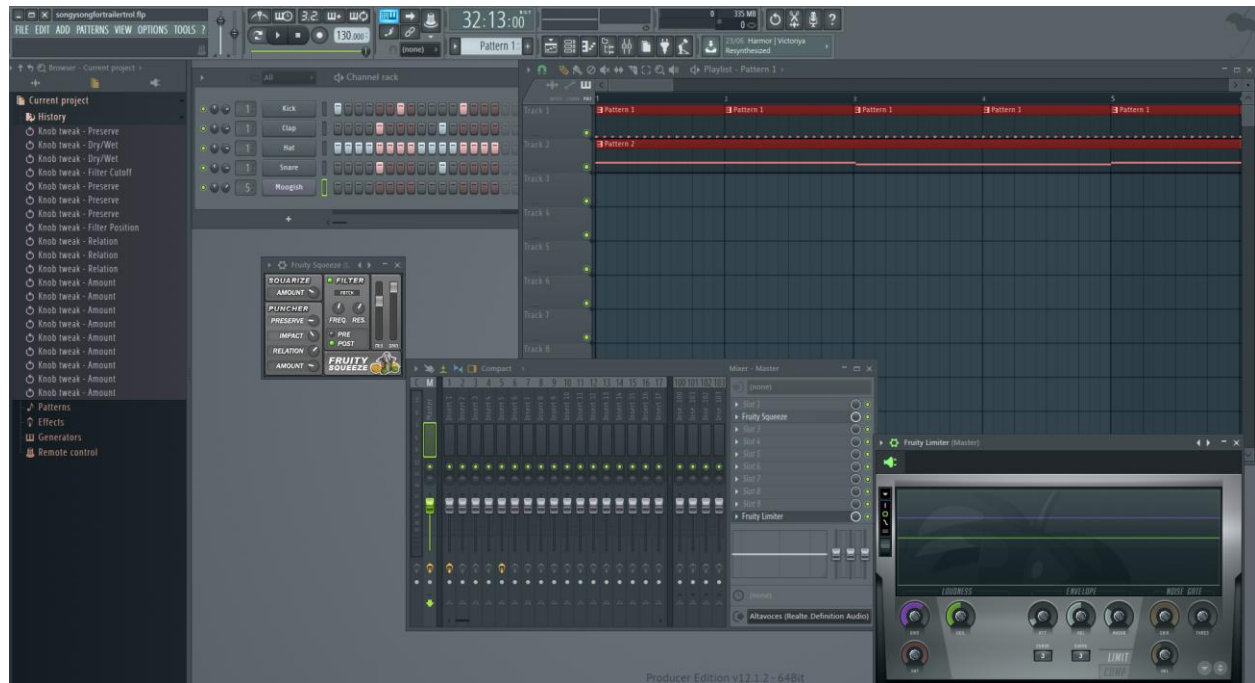
Then came the H animations. I had made some rigged animations for H for when he came out from the screens like a spider, but three.js didn't read very well my bones, animations and model with them, so I had to scrap that and do a simple baked animation with the head, now instead of a spider H seems like a dead angel, which I was very satisfied with.

Then came moment for the electric rays that come out of the terminals to zap H. I simply used the splines generator three.js uses and used a light blue color for its texture.

Finally, the ray. I wanted an easy to grasp and use method for the death ray. So I opted for an easy to see option, the ray moves with you on the floor, it's big enough to see it from the "corner" of your eye with its bright red color. Also timing the sounds with the ray phases was made to help the player know when the ray would fire. At the last moment the ray (which is a big cylinder under the floor), elevates and is seen. If the player touches the area the ray takes in this moment he'll lose a life.

Under these mechanics the Final fight was done and ready.

Finally in the last month I produced the music using Fruit Loops Studio, a software used to create music and sounds. I created the OS sounds, the music and glitch effects in various moments.



# Marketing

Marketing for the project will have a Social media and immersion aspect.

The comic will have a kind of serial publishing. Every chapter is made and released, leaving the readers waiting for the next one.

The inner story for the project makes the player believe he is affecting the events in the story as if it was reality. The marketing campaign will have a similar effect in which the line between reality and story are blurred. Facebook statuses and Tweets will talk about what's happening in the story. Instead of addressing the reader as a reader, the language will imply the story needs assist from the player to advance.

Every time an update drops for the story a Facebook status will be published along with a tweet. The content of these publications will have some kind of cryptic nature. Instead of your typical

“Blank null, the webcomic in which you hack into an abandoned company's server to help the mysterious G to recover her memories”

We will use a more realistic, creepy and mysterious approach like

“Database updated. New subject found. STOP THIS NONSENSE”

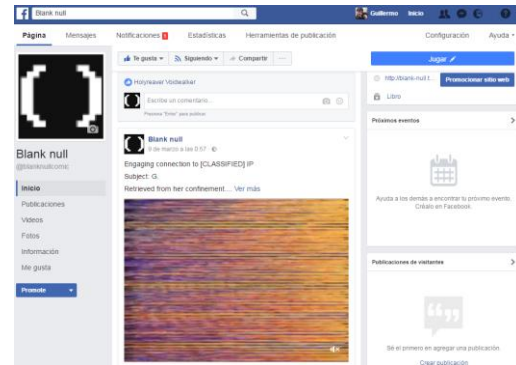
This will keep people interested and feel it's something interesting and fun to look at. If we use the first approach that behaves more like an ad, potential customers and readers will be thrown back by the “commercial” nature of the message, they will feel it's another one of those “independent artists that want people to read his maybe-not-so-original comic”. By using an original and interesting message filled with mystery and tactics that break the so called “4th wall” we not only communicate in a more direct and effective way the style of the work -reaching faster to our target audience- but we also can engage a viral campaign if it ever becomes one. This “viral” approach can be exploited to introduce new interactive segments in the story like a code that only you can get if you follow the facebook page to continue in the story.

A page for the project will be created named “blank null” and one for the fictional company inside the story “Nulwo” both will give hints and insight on details for the story, expanding on the ARGesque nature of the work and enhancing the sensation that the reader has an important role to play in the story as well as deepen the relationship with who runs these pages, helping him to move forward with the story. These clues not only will be in the social media pages, we can't do this as it could mine the experience for those who don't have a facebook or a twitter account, a solution for this is hiding the secrets still inside the main plot line, the facebook and

twitter hints will serve more of an “easy way to solve puzzles” if anyone needs some hand holding or doesn’t want the maybe “too hard for them” puzzles to ruin their experience with the story, as the design will be made for all kinds of players in mind, from the more puzzle solving kind of readers to the more story driven lovers.

The way the project will be known will be through 4 main ways:

- 1) From the ARG inspired nature, **a link to a webpage called “The void of secrets” will be posted on some tiny forums and social media pages** for curious surfers to investigate, people that get interested to continue will be faced with a command shell puzzle, really easy to solve with a shady and mysterious ambience to it. After this interaction, the player will have spent around 15 minutes at least to the moment where they are introduced to the main character and agreed to help with her requests. This closes chapter 0 and concludes the prologue of the story, moment in which the player will stop.
- 2) After this interaction the game will prompt to share the link given in the forum to friends and people by using an unknown message and interaction coming from the story. As people sometimes find it fun to follow orders or follow along with the game’s requests and flow, they will end up **sharing the game**. This will attract more players to enter and maybe solve the puzzles in couples and in community if things end up really well.
- 3) **Sharing around my personal friends’ and circles**, posting the cryptic videos, images and material and asking them to share them around, they can generate viewing from friends in their social media.
- 4) **Guerrilla advertising**. This consists of posting around in real life posters talking about the company in the game as if it was real, qr codes to scan with the mobile to guide to the webpage, curious images that contain obvious hints towards some google searches leading to the webpage. If I can do it, recruit some known people around the globe to do the same and add deepness to the project and more spread around the globe, looking for an audience in a lot of countries. Mainly in Canada, where the story takes place. An ambitious thing to do, but not impossible.





## The Retro Aesthetic

The visual and aesthetic style for the project is “glitch art” and 80’s & 90’s retro aesthetic.



Quick Moodboard.

The art and aesthetic direction will go to the immersion on a still era, the 80’s and 90’s visual style. The whole story takes place inside of 90’s computers, so the presentation of elements will have a clear windows 9X feel to it. VHS videos will play also an important part in the moments video is played. In game design the notions and puzzles will reference and pay with notions 90’s and 80’s games had in those years as

well as play with mechanisms that the Operative systems of that era had to deal with or operated by such as limitations and features like using a command shell.

## The Target Audience

The target audience for this project can be summarized in the next groups:

- **10 to 17 year old teenagers that like shady, horror and/or sci-fi oriented content on the internet.** The ARG nature of this story can drive the curiosity from the mind of curious teenagers that have been browsing the web for enough time to be interested in obscure internet secrets. Lots of teenagers browse forums nowadays, and as part of the marketing campaign to promote the game, these teenagers are expected to find these links and enter, hooking up some of them.
- **Lovers of ARGs and puzzle solving.** This group of fans can find light enjoyment out of the reality bending aspect of the story as well as the human interaction and 4th wall breaking taking place all over the narrative. Attracting these customers will be through the link in sites or very well from the Guerrilla strategy, as some of them will find out about the game and get interested.
- **Adventure-loving gamers.** Gamers that love classical point and click adventure games and escape the room puzzles will find enjoyment here. The same way of finding about the webcomic is applied from the ARG lovers.
- **Retro aesthetic lovers.** This audience is known for loving all about retro aesthetics like the moodboard shown the page before. People like this will find appeal in the looks of the game and will stay for experience more of this retro styled gameplay of solving puzzles through browsing an old computer interface and worlds made in old 90's 3d graphics.

The last three groups of target audiences range from ages 14 to 27. I estimate that the story plot and themes treated in this project will appeal to this demographic as it reaches out to experiences that tend to touch emotive and not-so-mature topics like personal identity, loneliness, world perception.

## Personal Marketing

In the case of this project there is not much I will be saying or exposing about myself as a creator. Part of the immersion factor of the project is believing the story is real, this comes with the implication that the work must be as separate from the artist as possible. By this I mean that only one tiny mention of who developed the game will be displayed somewhere in the work in some way.

Now, how will I sell or market myself? Well there are some conventions in place that helps this notion of identifying the creator. In first place, the art style and general aesthetic of the work. Part of the work is done in illustrations.

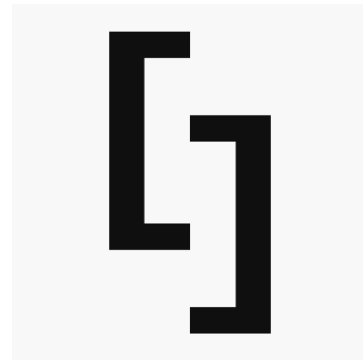


Different emotions for the protagonist, G.

This sheet displays the art style for the project, signature for the brand that develops the work.

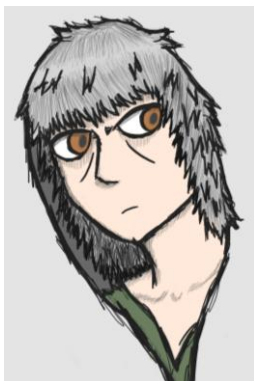
There is a distinct use of a defined art style in the work. Little traits in the illustrations that set the project's style apart from other ones. For example, the use of lines for shadows, or the shape of the eyes, nose, mouth, the colors used (or lack of them), the sharp shadows on the clothes, all of these little details in the art style leave a mark on the mind of the person that helps him link the art with the creator and identify easily posterior works.

Another idea is to make a fictional link from the story to the real world. I created a studio called “Lan Studio”, which is my personal logo and brand [logo on the right], in some moment of the story a character named Lan is introduced, which is in some sort of way the “mascot” for the studio. He will mention how he has his own studio “Lan Studio” (fun enough to call your own studio with your name) and will give an URL and joke on the fact that he is shamelessly promoting himself in the middle of a serious situation. This will trigger the reader’s interest or curiosity and will go to the URL Lan is giving them. This conducts to the official page or facebook page of the studio which is the creator of the project itself. This has implications in the story and real world, as the readers will remember their first interaction with the studio as “Lan’s studio”.



Lan as a character is the “mascot” for the studio. The plan is that in every project Lan Studio makes; Lan, the character, appears as briefly as a cameo or as a secondary character in the story. This gives the creative studio a distinct mark in all of his works apart from a defined art style that could be forced to change depending on the nature of the project. Lan is there to give more support to the idea of “signature details” that makes the studio unique.

Instead of focusing on a person behind the project, the character inside the projects is the sign that “This studio is the one who made this”. Lan is a reference to the “Local Area Network”, a concept in computer engineering that deals with the connection of multiple terminals or computers. Lan is connected to every project the studio makes, from here comes his name. The name came also from the desire to make a character with an unique and easy to remember name. [Concepts, art and doodles of Lan to the left]



When the whole project ends in June, I will develop it further to finish the story. This project was thought to be a developing story through 1 or 2 years. It will still be developed under the name of the studio and I will credit myself for it when time to find work in new companies arises as I think it could work for digital advertising companies to display my abilities in interactive design.



# Conclusions

In this project I had a lot of fun. Mostly due to learning new ways to use interactive media in HTML5 and explore its potential. I had fun designing and making a thought about the puzzles and PCs environments, designing them, drawing the sprites and illustrations, modeling the character, animating it, editing the videos, adding the post-production and producing the sounds and music, it was all a real challenge as well a learning how to use three.js. Most of problems came because of unexpected events like not knowing three.js had bad portability with rigged animations and no native collision detection. Even with these problems I am proud I could come up with creative solutions that left me satisfied.

After all this project I really feel more confident with my programming abilities, game design abilities and in general I now have a better sense on how to approach and develop a project like this, which is practically a game.

I am really happy with the quality and sensation of the whole product once finished and I feel proud of myself sincerely. I poured a lot of my soul and effort into this and seeing it as close as I envisioned it in my head is a fantastical sensation.

I feel ready to tackle on the rest of this project on my own in the future and go and direct several other projects that may come in my personal and professional career.



# Annexes

[Proyecto / Juego](#)

[Video Gameplay completo](#)

[Teaser Trailer](#) (Duración 1:06)

Test documents:

[Testing plan](#)

[Report](#)

[Results](#)

[Presupuesto General](#)

[Gannt Diagram](#)

[Github page](#)

Flow Diagrams:

[Part 1](#)

[Part 2](#)

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