The main project of this research is the railway environment, which is particularly focused on the traffic within railway facilities. This one is controlled and recorded by the TCC (Traffic Control Center). In regards of train traffic, there are two main standards to be achieved. The first one is security, which must be mandatory at all times. Close related to this one, there is the efficiency. At the time that trains follow security procedures, they have to reach each of the stations using the minimum time possible. This project wants to improve efficiency. Trains run along the railways either stopping at train’s parking or at red traffic lights. TCC is in charge of scheduling traffic within rail circuits and setting all correct signals for that purpose. Nowadays, these mentioned duties are all carried out manually by TCC staff. This normal procedure causes human mistakes that mainly cause waste of time and failure at security policies. This project shows a parallelism between the train traffic and a communication network, where the train station is a graph and the rail circuits are edges. An algorithm is used to find the shortest way between two given points as done in a network. The rule to follow is that trains can run in both directions on the railways. But once they follow a destination, trains can not go forward and back. This restricts use of trains causes a constraint. To implement the application, a programming language is required. The one selected in this research is an object oriented language, which provides with lots of advantages. The mentioned framework is Java.