CyberZone Software Solutions

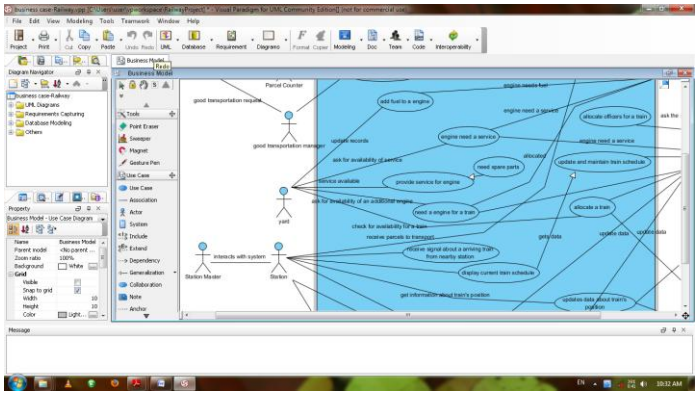
Project: **Software System for Sri Lanka Railway Department**

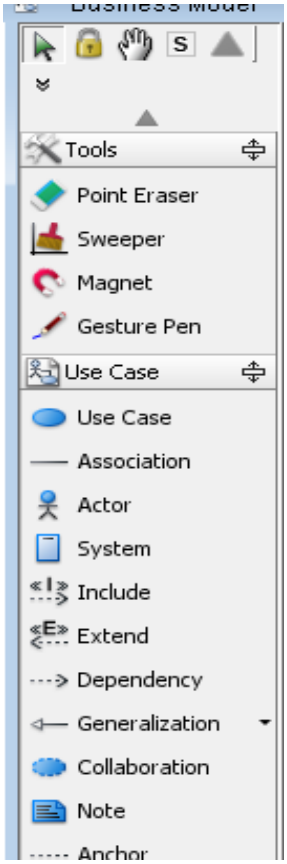
Practical no.2: Inception Phase Activities for Unified Process

Group Members	
100029X	Amarasinghe,M.A.D.M.P.
100346P	Muramudalige,S.R.
100409M	Premathunga,D.D.R.C.
100563D	Waidyarathna,U.H.S.A.
100577A	Weerasinghe,L.A.

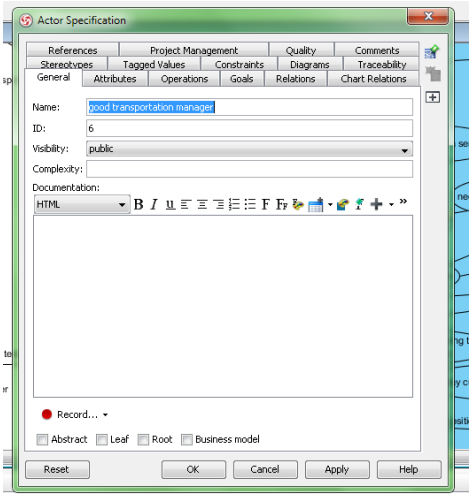
Description about the Tool

After using few tools we decided to use Visual Paradigm 5.3 as our tool due to various reasons. Previously we tried few tools like Violet UML editor. But they did not have all the functionalities we want. Although violet UML is a totally free tool we had to use various other tools to finish our task. But Visual Paradigm provides all the functionalities we want and it has some advanced features so that we can model our system easily.



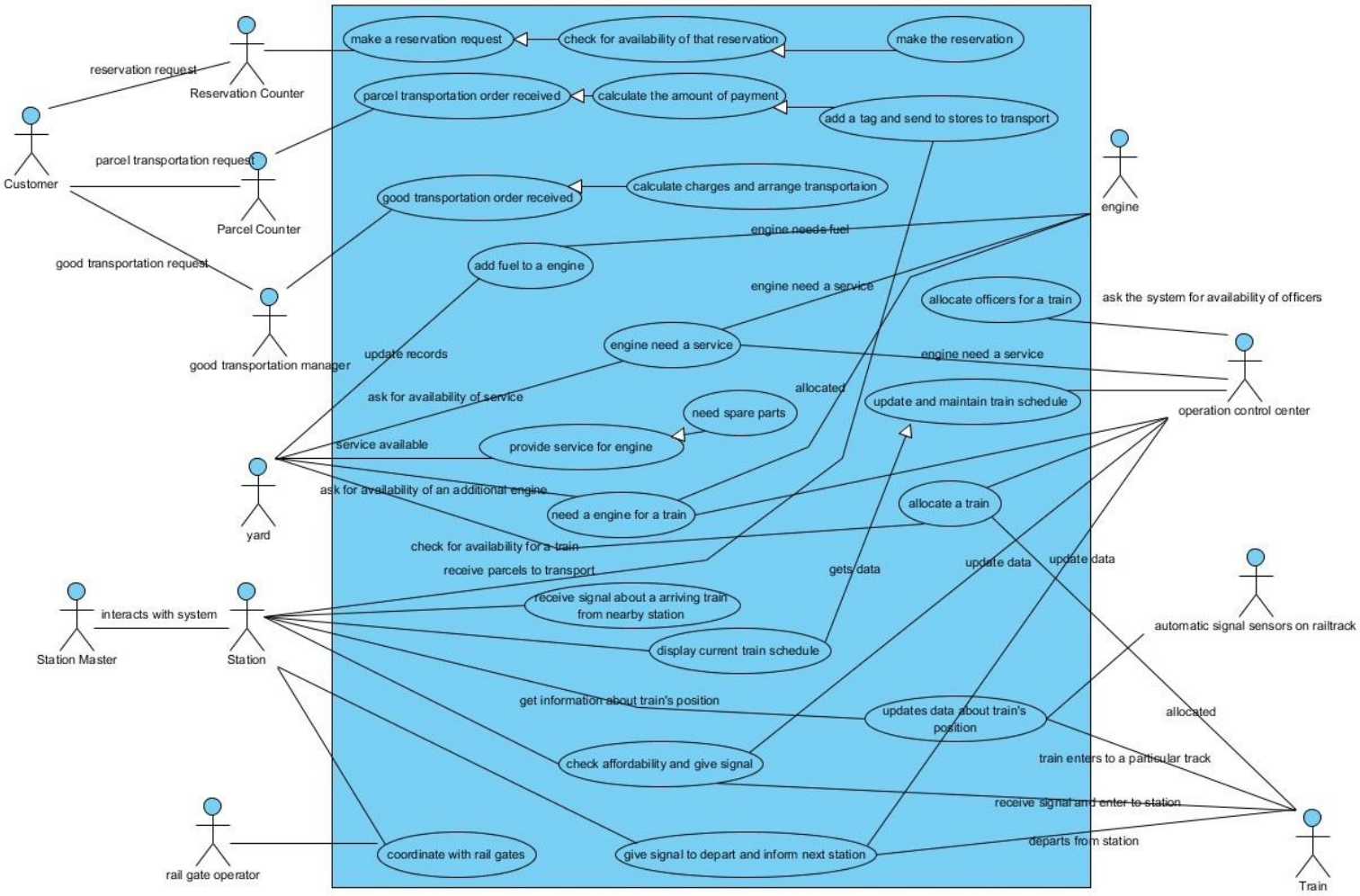


Visual Paradigm is not free software. But it provides a community edition that can be used not for commercial purposes. It provides so many advanced features which can be used to connect our use cases, work flows, and class diagrams. For example we can add a method in activity diagram so that that method goes to all other diagrams.



We can use various colors to distinguish the things in the diagrams and label them easily without worrying about the alignment of the objects. When compared to violet UML, visual paradigm is much better. But the user friendliness of the software was there in both. We can set specification of each object by just easily right click and it is another advantage in visual Paradigm.

Output from the tool for the requirements of the project



Vision of the System

The primary benefits of our software system are giving Railway Department an ability to handle their whole processes easily and efficiently. So it will help them to increase their profits and they will be able to use their resources efficiently.

Our objectives are giving a fast and reliable system to Railway Department so that they can give a competitive service to the people with other transportation Medias with their limited resources. We all know our client is having so many problems with their quality of service because of they don't have a proper system of handling them. So our main objective is to help them with our system to give a better service to general public.

Our system is capable of handling all kind of their needs like customer dealing, train maintenance and allocating resources, scheduling and tome table management, signal handling, station and rail track controlling and etc.

Business Case of the system

We tried to categorize the main section that our client dealing with so that we can divide our system into sub systems according to that model. We understood few main sections of their system like Operation controlling, Customer dealing, Stations and Rail Tracks, Signaling, Train maintenance and resource allocation.

In each section we tried to understand their main functionalities and model them into our system. So we modeled that operation controlling has to take care of train scheduling without any clashes between times. In the case of delay or any such problem our system should update the schedule so that passengers can travel to their destination with minimum delay. So our system must keep the information about the current position of the each and every train for the use of operation control center. They also need the ability to control the signal system from a central place.

At the customer dealing section they have to handle the reservation requests for the customers for train seats. And they have to handle various types of

parcel handling things like letters, animals etc. So they need our system to handle all kind of parcel transportation orders through our system. Not only parcels but also they have to handle good transportation orders like gasoline, post, etc. They need a separate mechanism to handle those transportation orders.

At station they have the most complicate operations to handle. From local signal handling to customer dealing they have all kind of operations there. In local signal handling they have to take care of giving signals between two stations, closing rail gates allocating platforms for coming trains, maintaining track conditions and speed limits etc. They also need to display and inform the passengers about the current schedule. At yards they need information about the current conditions about the engines and trains so that they can efficiently do the maintenance things there. And operation control center can ask from yards any time for resources like engines to allocate for trains.

The Scope of the Project

From this project we are going to replace the current system of communication between stations and operation control system. So it will include a replacement of signal handling method also because then we can efficiently launch our system. We are going to make a new efficient system to handle seat reservation and parcel transportation. And we are going to change the way of keeping records about each and every train and engine so that they can efficiently access them and get information as they need. It will also help the maintenance process.

So to interact with our system it will have interfaces at stations, reservation counters, yards, operation control center and etc. Our system must also have the functionality to override the software functionalities manually in the case of emergency.

Estimate time cost

It will take about 350 person hours to complete our project. And we expect to get the maximum from each of our team members to finish the project within the time limit.