**Team B – Ekathra**

**TEST PLAN**

**Introduction**

The traffic modeling system is a simulation system through which different types of road would be attached to simulate the behavior of traffic. There are several components like roundabout, 2-way road, 4-way, signals, and T-junction so that they would act network of roads. To start the simulation, the user needs to input some parameters such as: number of cars per minute, reaction rate.

**Scope**

**The main objective of this project is to deliver a website that can help to simulate the traffic using different scenarios will be tested in this website before they are delivered to the client.**

**Test Strategy**

The following are the test cases needed to be tested before the product is delivered to the client:

* For T junctions it is important that the arrival rate of the car which should estimate the other cars speed and proceed accordingly with respect to the car which was ahead.
* Testing is done when the more number of cars intersect at the T junction and system should respond accordingly such that the flow of the traffic was not disturbed.
* For road with signals check that the signals synchronizes with the directions of the car which it is allowed and proper flow is maintained at the traffic.
* Cars which are generated randomly should slow down with respect to the speed of the before car and take the direction in a random way.
* Drag the 4 way junction and populate two cars moving in the same direction with different speed’s and check whether their move in different directions using a random manner and stop at the signals.
* Drag the 4 way junction and populate two cars moving in the opposite direction with same speeds and check whether their move in left directions using a random manner and stop at the signals.
* Testing was done in such a way that project obeys the basic traffic rules and follows the minimum requirements of the rules.
* First testing should be done on individual scenarios and later all the scenarios are combined through drag and drop feature and it is tested by implementing various combinations of the project and then it is delivered to the client.
* Drag the 2 way junction and populate two cars moving in the same direction with different speed’s and check whether their move in different directions using a random manner and stop at the signals.
* Drag the 2 way junction and populate two cars moving in the opposite direction with same speeds and check whether their move in left directions using a random manner and stop at the signals.
* Drag a roundabout and populate two cars moving in the opposite direction with same speeds and check whether their move in left directions using a random manner and stop at the signals.
* Drag a roundabout and populate cars moving in the all direction with same speeds and check whether their move in left directions using a random manner and stop at the signals.
* Drag a roundabout, 4-way, 2-way junctions and join them and populate cars moving in the opposite direction with same speeds and check whether their move in left directions using a random manner and stop at the signals.
* Drag a roundabout, 4-way, 2-way junctions and join them and populate cars moving in the same direction with same speeds and check whether their move in left directions using a random manner and stop at the signals.

**Environment Requirements**

**A full loaded system with all the software’s and tools installed that are required for the project to run. At present we thought of perform the manual testing for the entire project. Later on we can shift to using tools.**

**Test Schedule**

**As of now we are in the requirements gathering and planning the project so we don’t have the idea of the schedule for testing. Once we got the development idea and schedule then we will update the test schedule.**

**Control Procedures**

Everyone in the team was assigned with the particular task and once the individual delivers the output the code and the document is checked thoroughly.

* Reviews:

After testing each and every block of code a review or comment must be made.

* Bug Review meetings:

Whenever there is a bug or error found, we need to report to the particular individual who is responsible for building the part of code.

* Change Request:

If any requirement that does not match with the code then the proper change request will be initiated and sent to the development team. Serval versions of change request documents will be maintained for the future reference.

* Defect Reporting:

When a defect is identified an immediate feedback was provided to the team with proper comment and issue regarding the defect.

**Deliverables**

A fully loaded website with all the features such as drag and drop, buttons and on-click actions for the different types of roads, intersections and roundabouts. Placing car at different locations and giving the speeds for every car.