**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 on 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:

* To check whether the user drag and drops the type of roads that he needed to simulate.
* What if the user doesn’t select any road type and he runs the simulation.
* To check whether the user connects the type of road in an appropriate way.
* After connection user can be able to go back and re customize his road types if he needs to.
* To make sure that the T junction was dropped at the end of the road.
* Every entrance of the road should have car generator, based on which it should have some default values for the inputs of the cars and change those if needed.
* If the user gives some values and leaves remaining value system must take the default values which are set before.
* What if the user gives inappropriate inputs like negative values, rational numbers while setting the input parameters?
* To check whether the user gives the correct percentages upon which an adding there must be 100%.
* To check whether the user has the credibility to change the speed limits of the road if he needs.
* After setting all the values and preparing the simulation, the user must able to run the system. Then system must redirect to simulation page.
* To check cars must be able to take random direction by which user has selected.
* For road with a signal check that the signal synchronizes with the directions of the car which it is allowed and proper flow is maintained at the traffic.
* For a signaling system signal time should vary based on the type of road like a main road, High way etc.
* What if we click on the pause button on the simulation page?
* What if the user wants to change his inputs in the middle of the running simulation?

**Environment Requirements**

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

**Test Schedule**

**We will perform testing at the end of the each module as specified in the work breakdown structure. At the end, we will perform the unit testing before deploying the application.**

**Control Procedures**

Everyone in the team was assigned to 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 the 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. Several 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 the car at different locations and giving the speeds for every car. These are the documents that will be given to the client at the end of the project such as Test Plan, Test Case, Summary Report, Deployment Guide and Developer’s Manual

**Responsibilities**

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| Test Plan | Rama Naveen Kommuri. |
| Test Case | Rama Naveen Kommuri, Ashwini Cherukuri. |
| Manual Testing | Vamsy Chowdary Bobba and Sahil Nokhwal. |

**Approvals**

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| --- | --- | --- |
|  | **Project Manager** | **Quality & Testing Manager** |
| **Name** | Rupanandha Moori | Rama Naveen Kommuri |
| **Signature** |  |  |