Iteration Plan

Iteration 3

08/05/2020

Iteration 2 reflection:

Currently, we are at the beginning of Iteration 2 and until now there aren't any changes according to the plan. All of the tasks were separated to each team member and everybody knows what to do. The progress is updated constantly and the communication flow is excellent.

However, we decided that some features, that we have initially planned, should be removed and they are two types of roads - Non-priority roads and Highways.

1.Completely removed Non-Priority Roads
The reason for removing Non-Priority roads is that they would not reduce the traffic in our system at all, which is our goal. We realized that in order for the cars to cross lanes they have to follow the rule for non-priority roads, which say that the car on the right is always with priority. In our opinion the non-priority road will create insanely big traffic jams exactly because of this rule.

2.Completely removed Highways
We removed the Highway type of road because our system is made for city traffic and there is no sense in adding a highway inside the city. This would be really dangerous for the people in the city, because usually the limit in a highway is around 90 km/h and the limit inside a crowded place is 50 km/h which makes this type of road absolutely incompatible. However, for instance, if we decide to reduce the limit in our system and make it the same as the limit in a crowded place - 50 km/h, this again will create traffic jams and will not have any positive outcome.

Moreover, the team decided that the additional types of roads that were planned for iteration 3 such as bridges and joins should also be removed. Since the programming environment used for the project is Visual Studio and all of the graphic visualization is in 2D, the implementation and the visualization of a bridge or a join cannot happen.

One major change was that we decided to add in our iteration 2 plan the features from iteration 3. We may work harder in this sprint,but if we manage to implement everything we promised, in iteration 3 we can focus on optimizing our solution and even add more features.

Iteration 3

Scrum Activities:
- Planning: Include tasks that are already planned for the second iteration which can be seen below in section **Activities and Tasks**
- Daily Scrum: Update the progress of each task per week in a time-boxed meeting
- Review: Show our progress and deliverables of iteration 3
- Retrospect: Have a time-boxed meeting where the team should evaluate and give feedback from the second iteration
- Refinement: Have time-boxed meeting during iteration 3 to define tasks for the completion of the application

Activities and Tasks
- Designing software and implement the set-up of application with a set of functionalities as written in the project plan on the second iteration
- Testing the software method of the code of each set
- Adding additional features if time left
- Documenting and creating reports
- Update design document
- Update work division report
- Finishing the promised activities
- Prepare for final presentation

Additional Features
1. Research for a graph library in visual studio
   In order to display a nice view of the simulation's statistics, we need to research the possible graph libraries in visual studio and find out which one is the best in our case.
2. Statistics view
   A view where the user could see and compare results from previous simulations.
3. Additional path finding algorithms
   Currently, only the Dijkstra algorithm is supported for the police car, in order to find the shortest path to the crash. Additional algorithms that could be added are as following :
   - ◆ A* Search
   - ◆ Greedy Best-first Search
   - ◆ Breadth-first Search
   - ◆ Depth-first Search

Planned Deliverables
1. The final version of URS and Design document
2. Planned additional features
3. Source code of the final product
4. Unit tests of the final product
5. The final product
6. Process Report(including work division report)