Traffic Simulator

Agile Tracking Sheet

Jack Lee

12 December 2022

CS 225, Fall 2021

Embry-Riddle Aeronautical University

Daytona Beach campus

1 Aerospace Boulevard

Daytona Beach, FL 32114

Table 1: User Story Summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **User**  **Story ID** | **User**  **Story** | **Completeness**  **Criteria** | **Effort**  **Estimate**  **(hours)** | **Priority** | **Worked in**  **Sprint**  **(Estimated)** |
| 1 | As a software designer, I want to assign different Drivers to Cars. | Driver objects can be assigned to Car objects. | 1.5 | 1 | 1 |
| 2 | As a software designer, I want to put Cars on the road. | Car objects’ position change with time according to road conditions. | 0.5 | 2 | 1 |
| 3 | As a user, I want to see statistics about the Cars. | The total cars, average speed, and traffic flow rate are reported to the user. | 2 | 3 | 1 |
| 4 | As a software designer, I want the Cars to respond to slowdowns and traffic. | Cars brake if Cars ahead within visibility range slow down. | 2 | 4 | 1 |
| 5 | As a software designer, I want the cars to avoid accidents. | Cars avoid changing lanes when another car is beside them. | 2 | 5 | 1 |
| 6 | As a user, I want to simulate text files. | Simulation can load and run text files. | 3 | 6 | 2 |
| 7 | As a user, I want to know if files I load have errors. | Simulation catches file errors and reports them to user. | 2 | 7 | 2 |
| 8 | As a user, I want to pause the simulation. | Simulation can be paused while running. | 4 | 8 | 3 |
| 9 | As a user, I want to play the simulation once paused. | Simulation can be played again once paused. | 2 | 9 | 3 |
| 10 | As a user, I want to be able to change and define the speed limit. | While paused, the speed can be changed. | 1 | 10 | 4 |
| 11 | As a user, I want to change the weather and lane number. | While paused, weather and lane number can be modified. | 1 | 11 | 4 |
| 12 | As a user, I want to slow down Cars. | While paused, Cars in any lane can be slowed down. | 2 | 12 | 4 |

Table 2: Sprint Work Summary

|  |  |  |  |
| --- | --- | --- | --- |
| **Sprint** | **Backlog** | **In Work**  **This Sprint** | **Completed**  **This Sprint** |
| 1 | 1,2,3,4,5,6,7,8,9,10,11,12 | 1,2,3 | 1,2 |
| 2 | 3,4,5,6,7,8,9,10,11,12 | 3,4,5 | 3,4,5 |
| 3 | 6,7,8,9,10,11,12 | 6,7 | 6,7 |
| 4 | 8,9,10,11,12 | 8,9,10,11,12 | 8,9,10,11,12 |

Table 3: Weekly Remaining Effort Estimate (Burn Down Chart)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Start\*** | **Nov 11** | **Nov 18** | **Nov 25** | **Dec 2** | **Dec 9** | **Dec 12** | **End** |
| Planned | 25 | 21 | 17 | 12 | 6 | 2 | 0 | 0 |
| Actual | 25 | 25 | 23 | 17 | 12 | 6 | 0 | 0 |