Design Document

version 1.3

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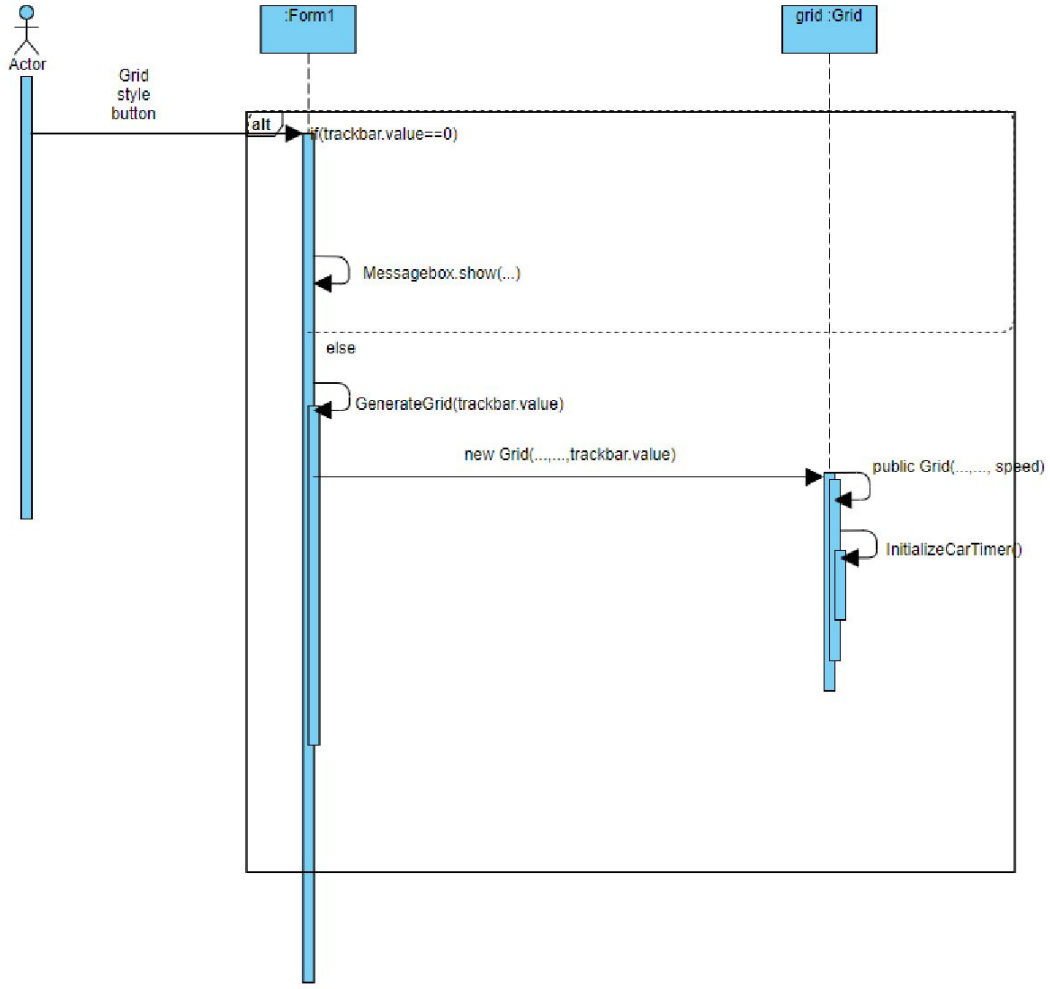
Introduction

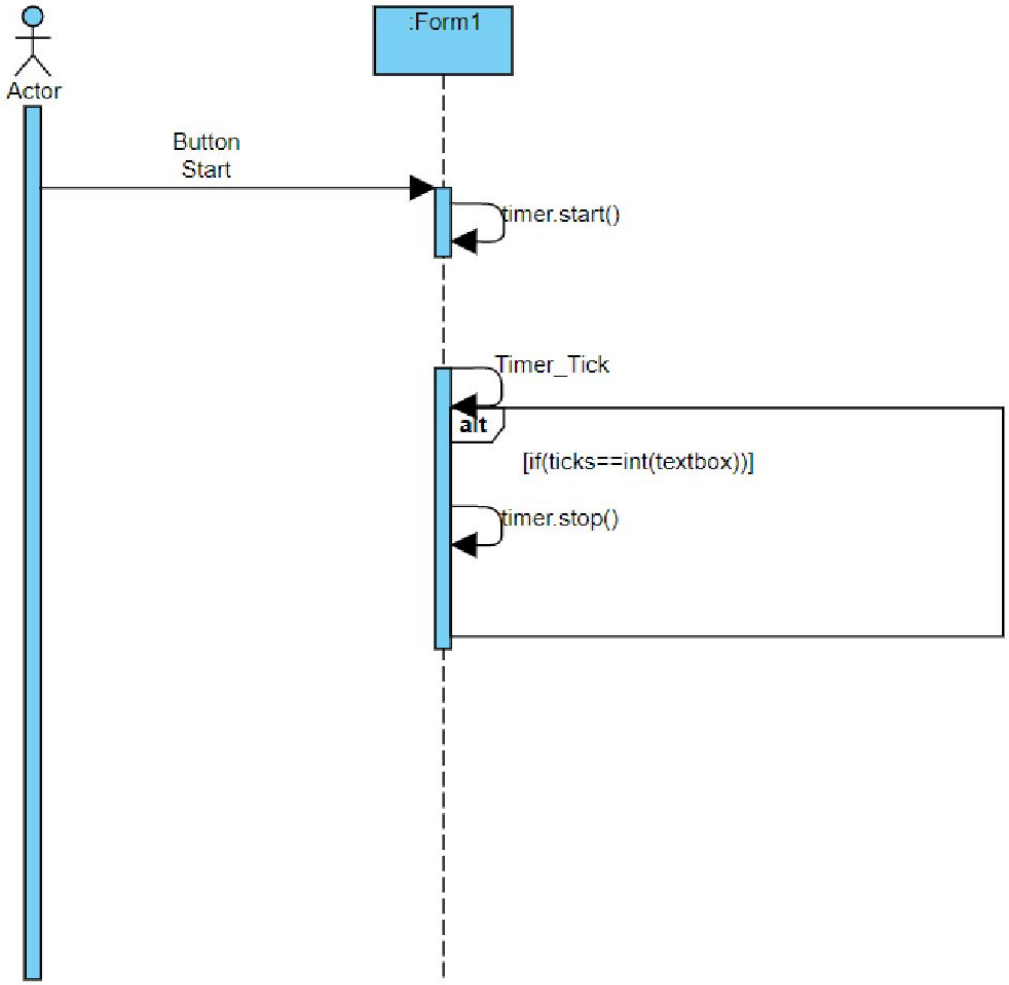
This document contains all the sequence diagrams from iteration 2 and the most up-to-date UML class diagram.
The UML class diagram contains all the classes in our application and their relationships.
The sequence diagrams are based on the use cases we included in the “User Requirements Specifications” document, the details on these diagrams are found in that document.

Sequence Diagrams:

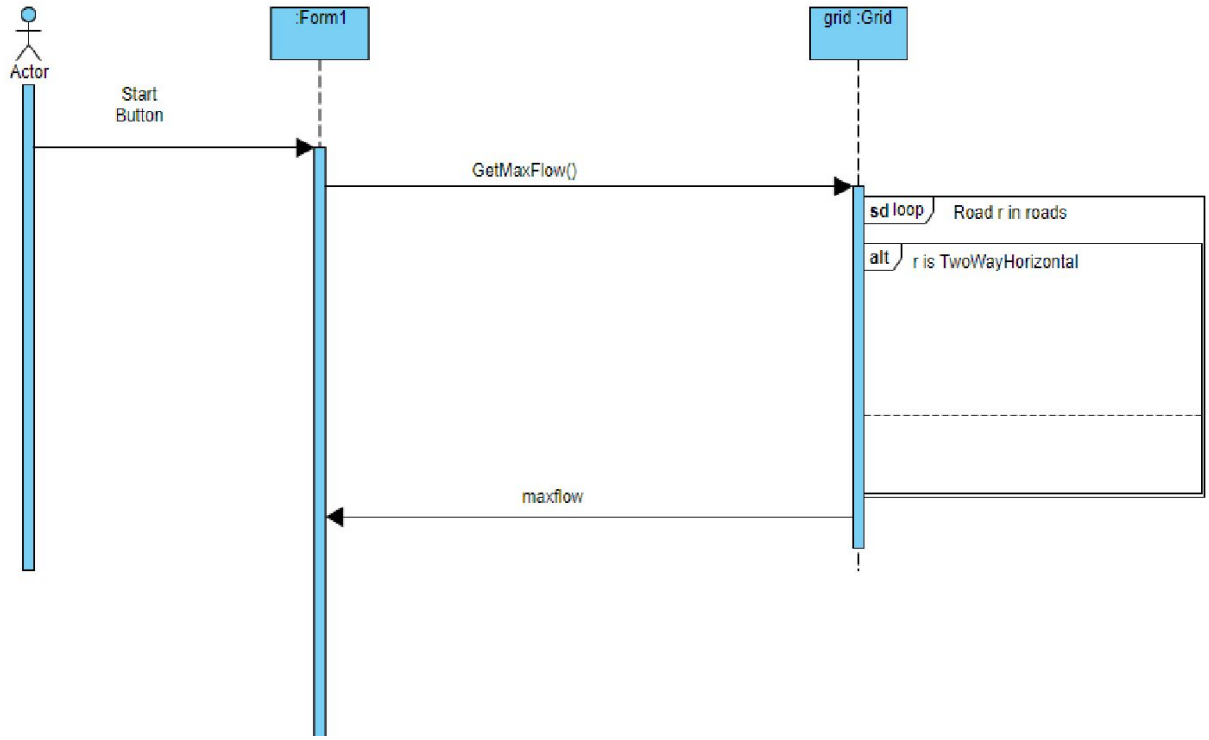
Adjusting the speed of the simulation



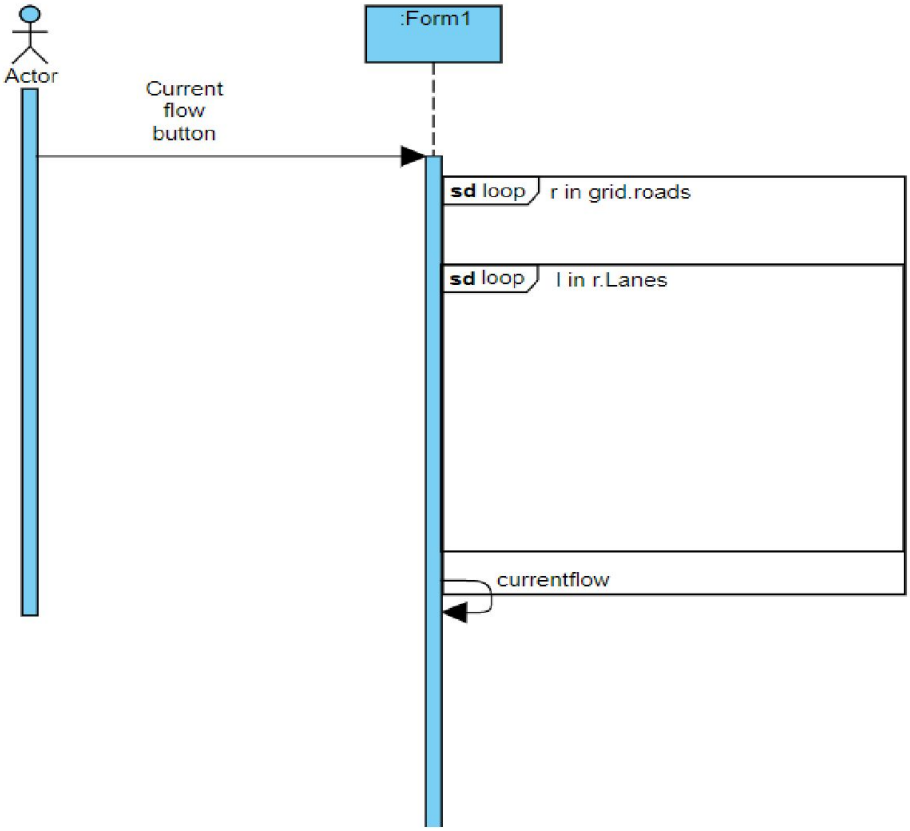
Adding duration to the simulation



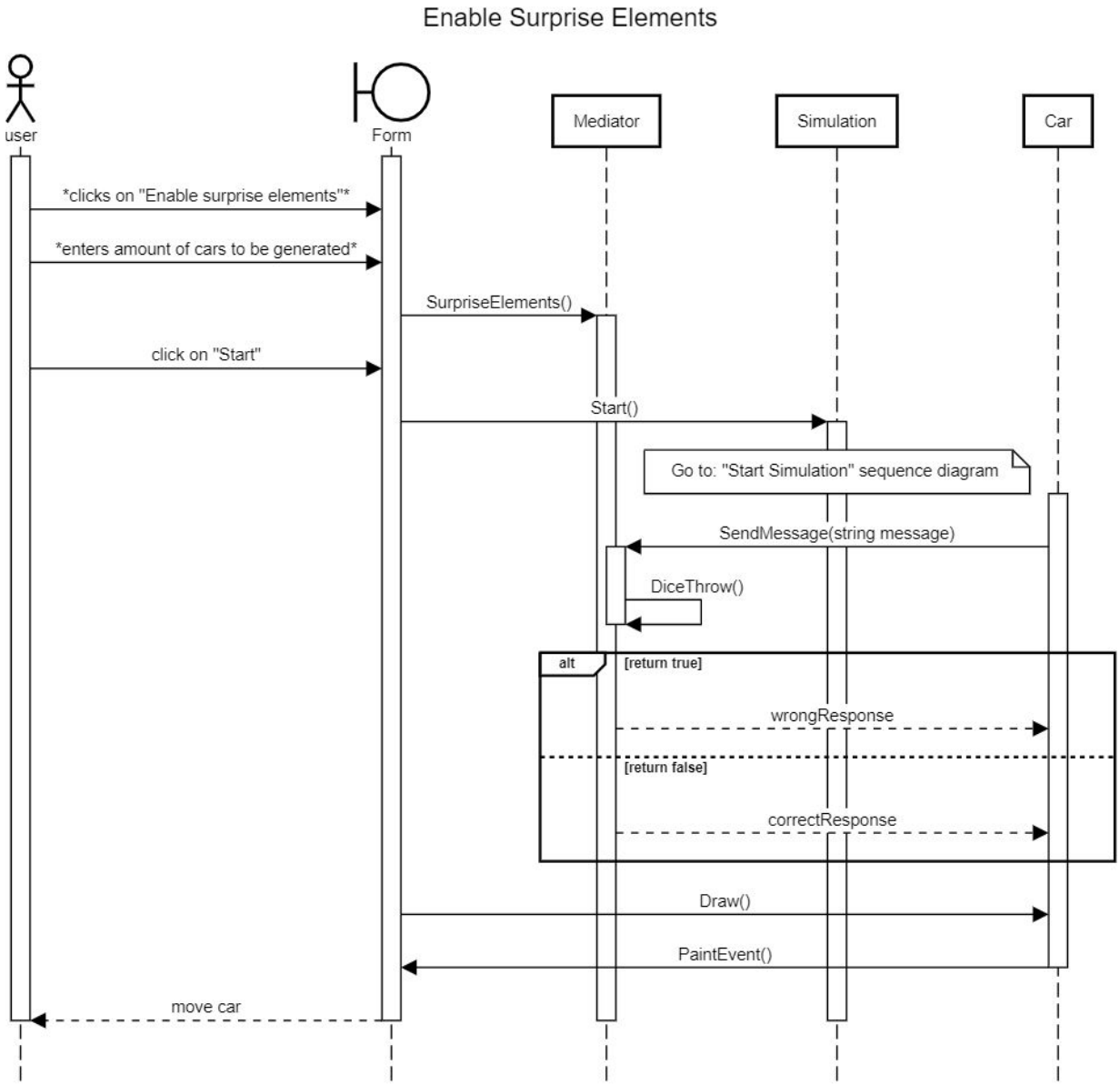
Calculating maximum flow of cars on the road network


Actor
:Form1
grid :Grid
Start
Button
GetMaxFlow()
sd loop
Road r in roads
alt
r is TwoWayHorizontal
maxflow

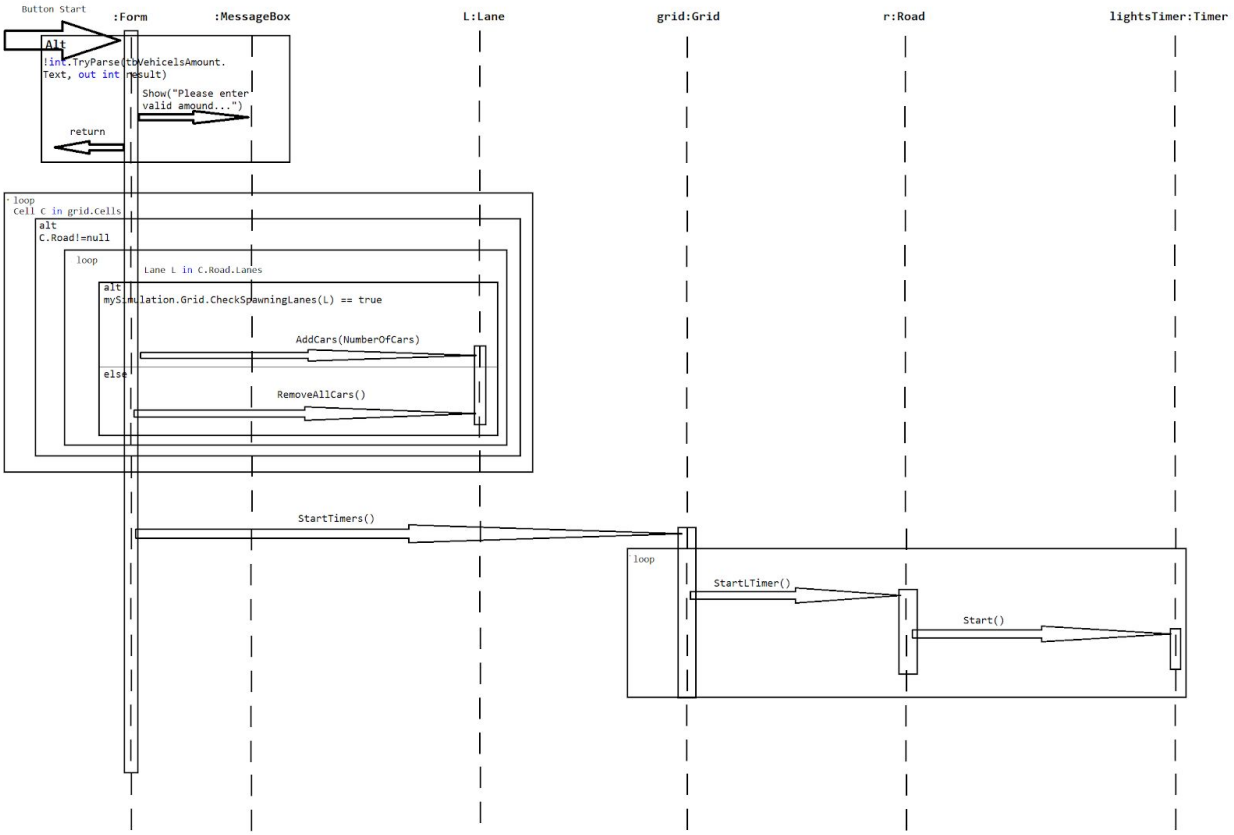
Calculating current flow of cars



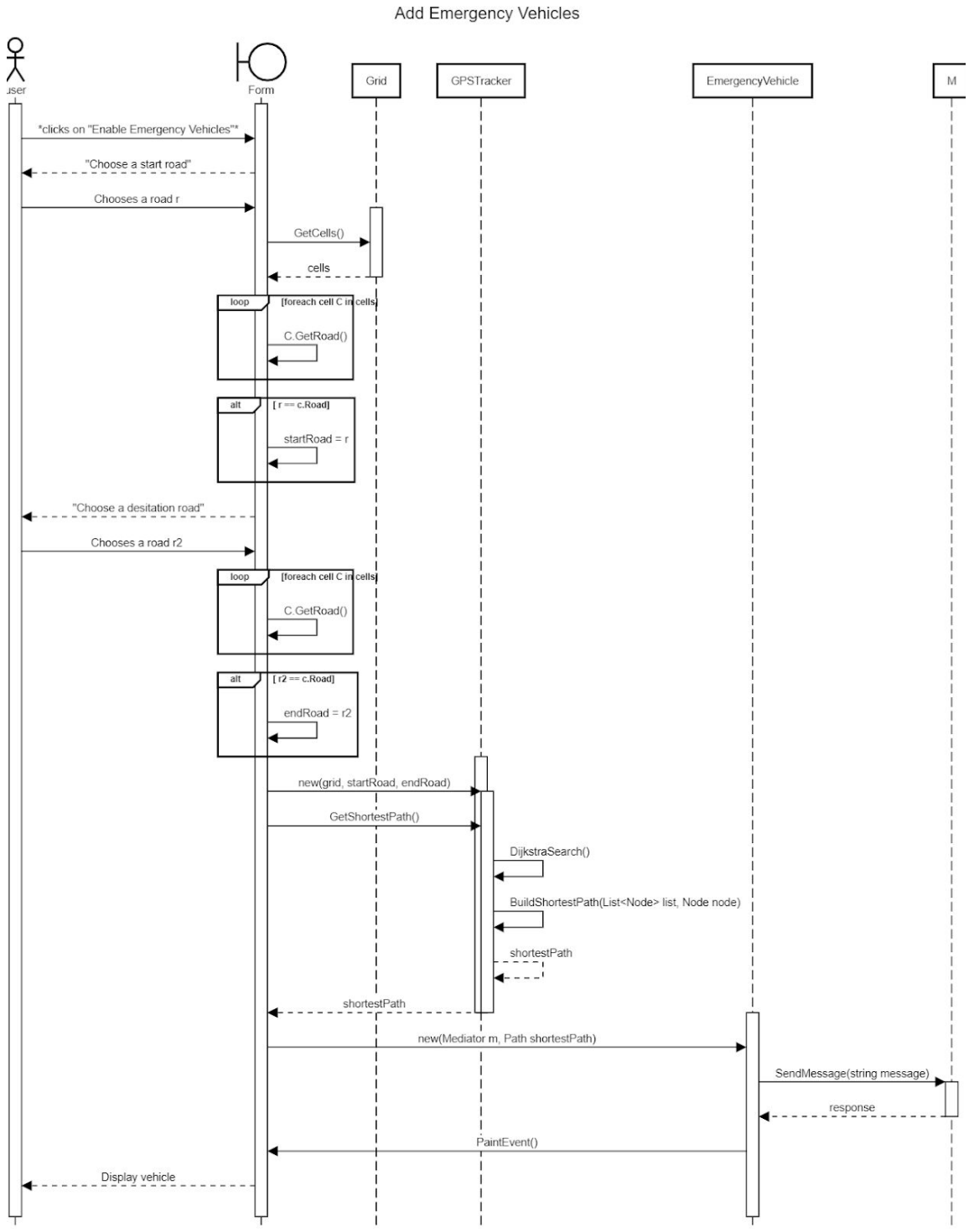
Enable Surprise Elements



Start the simulation: Sub-diagram

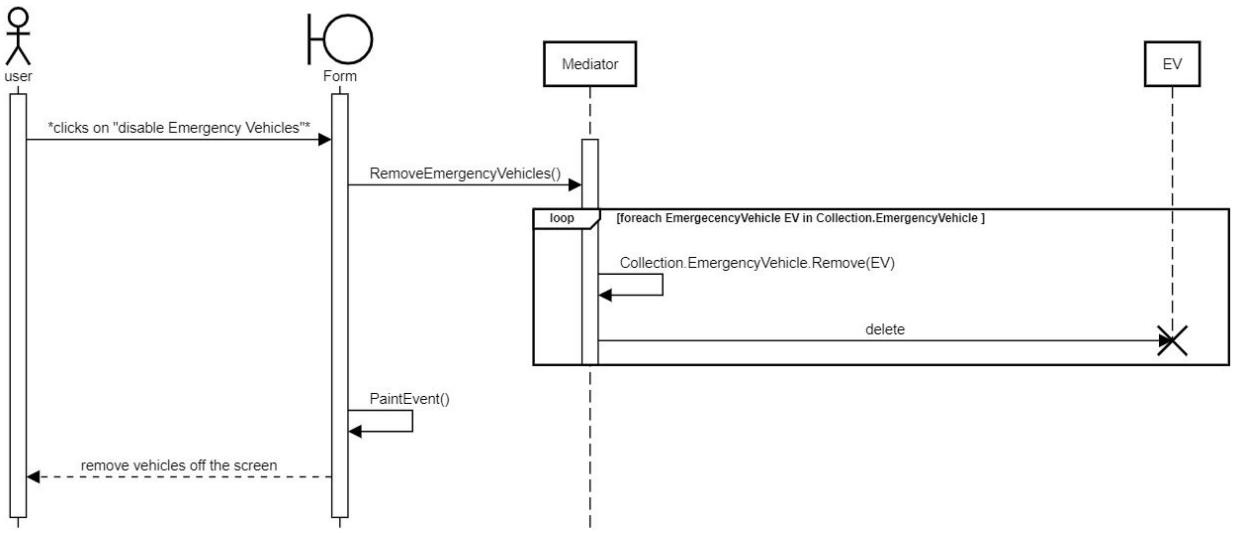


Add Emergency Vehicle

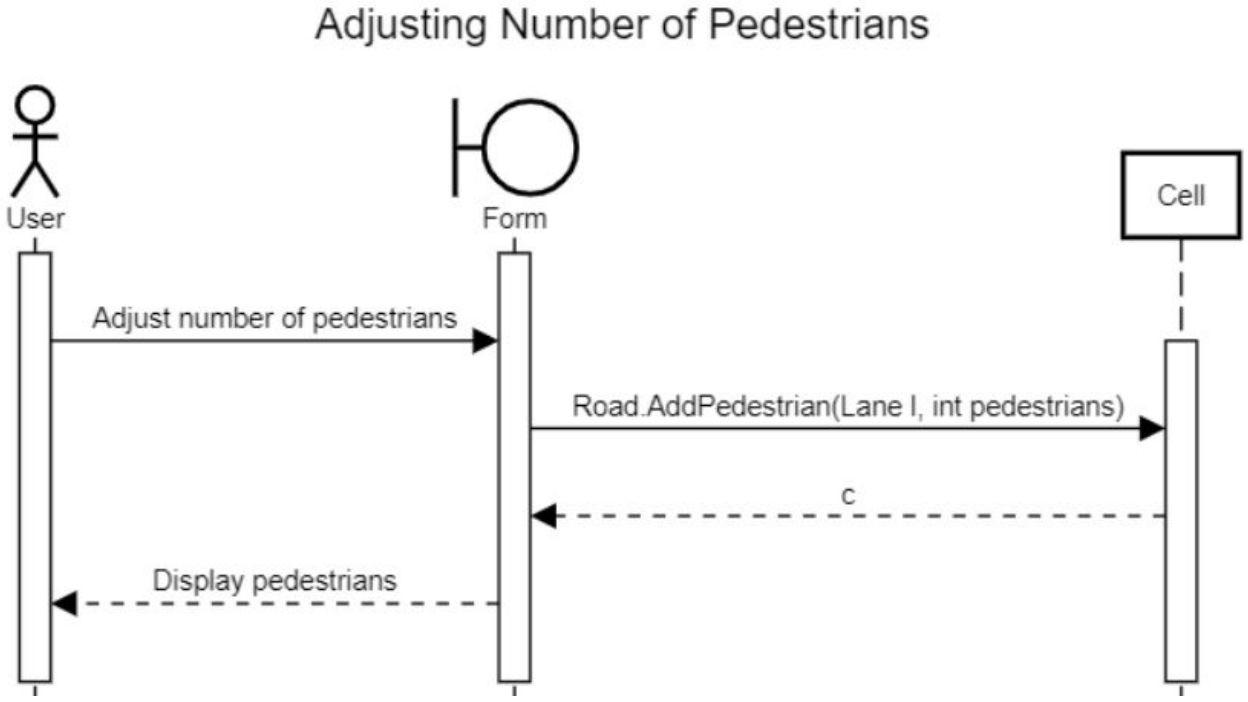


Disable Emergency Vehicle

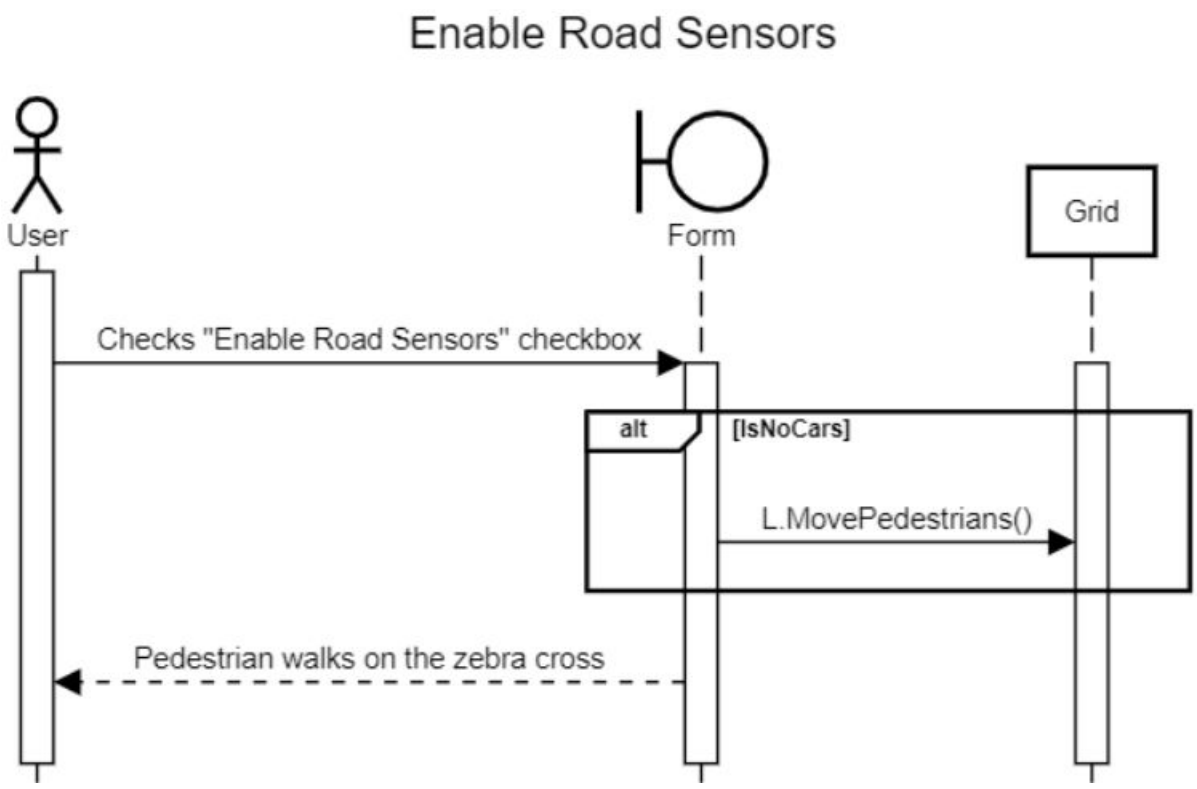
Remove Emergency Vehicles



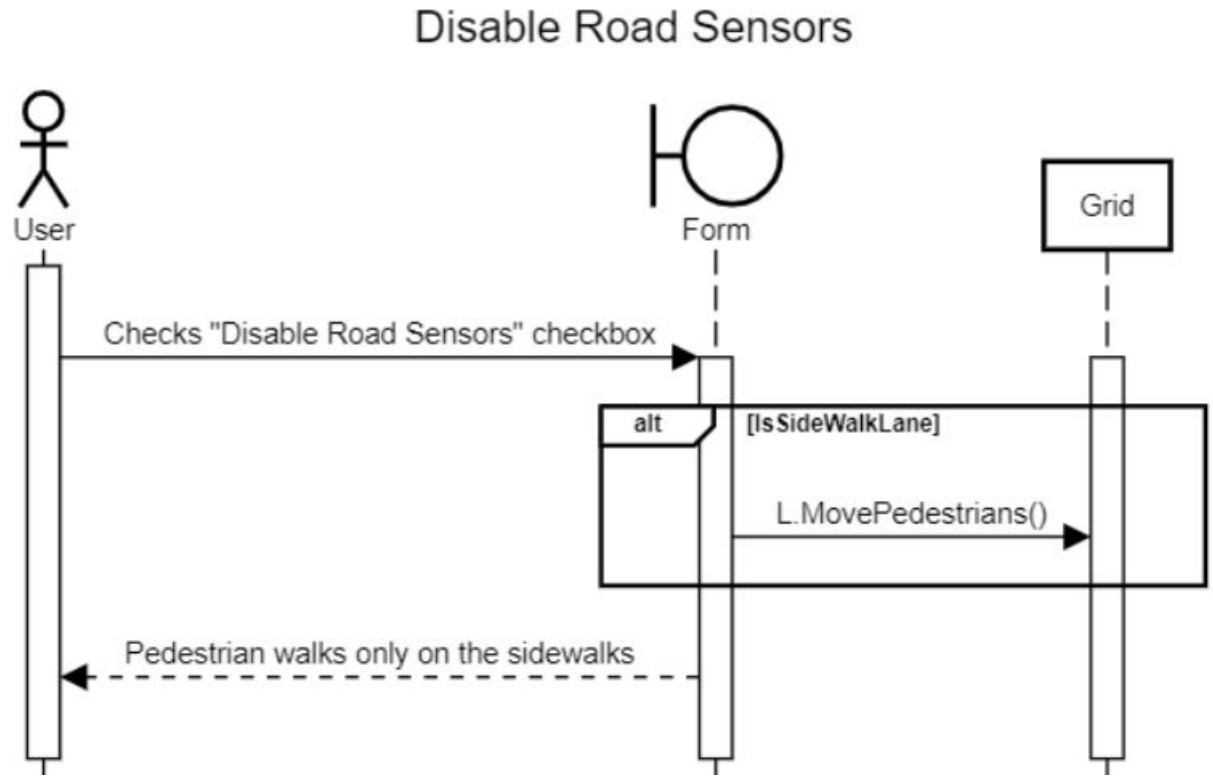
Adjusting Pedestrians



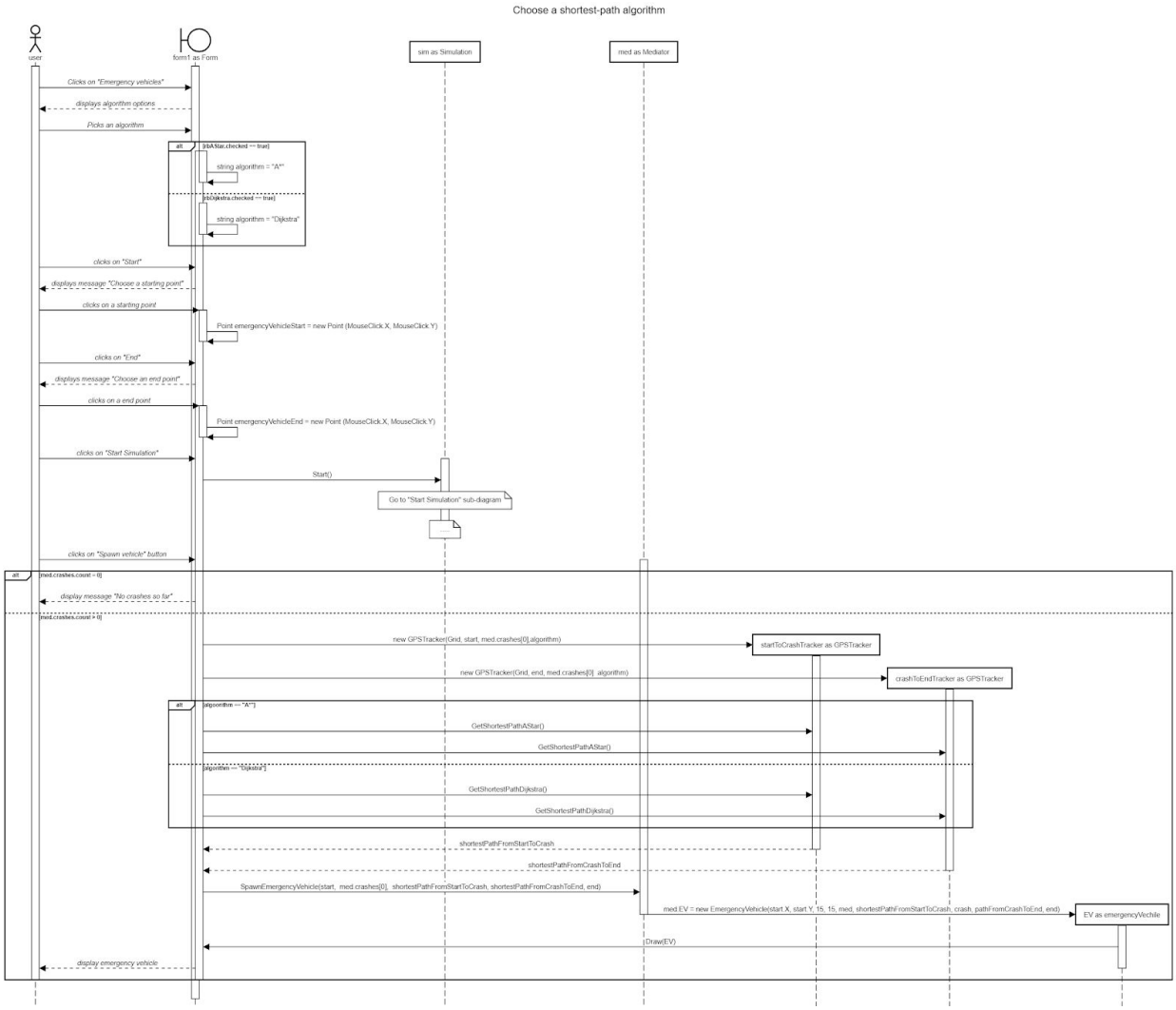
Enabling Road Sensors

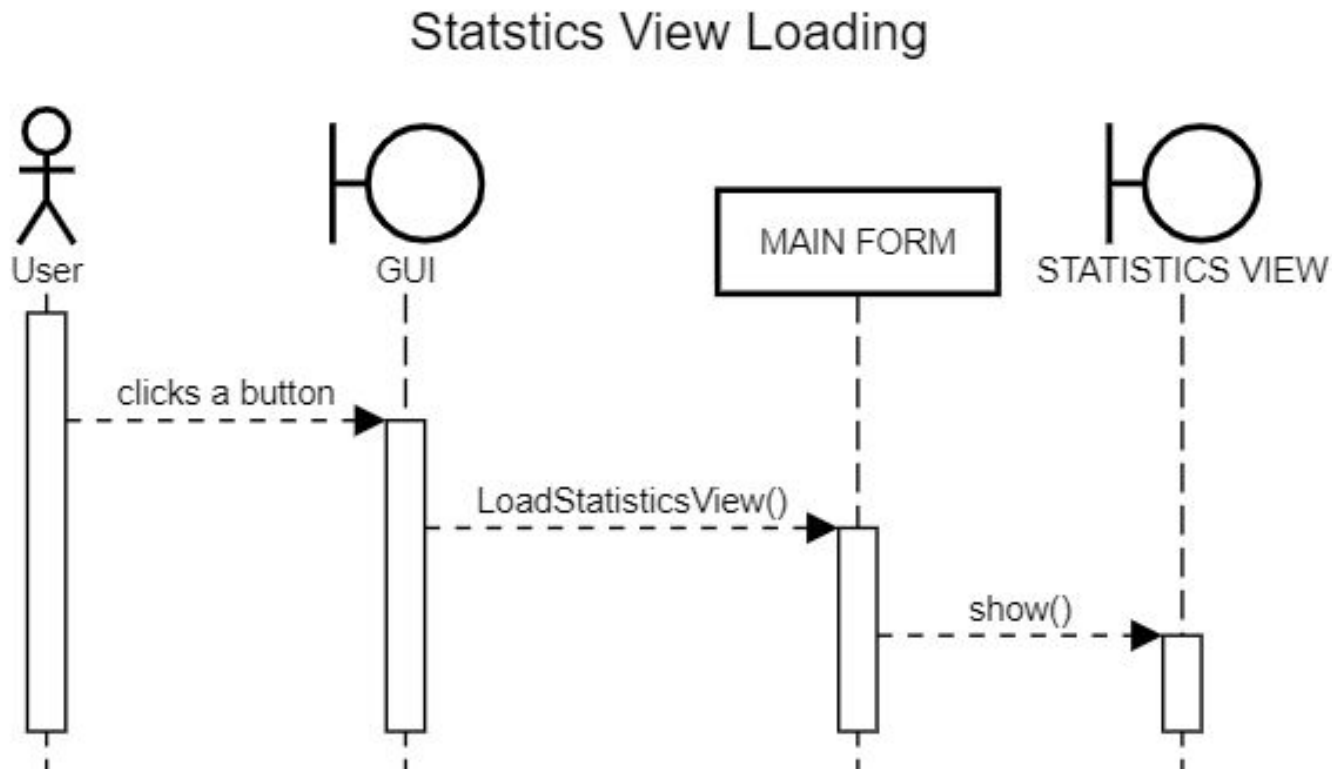


Disabling Road

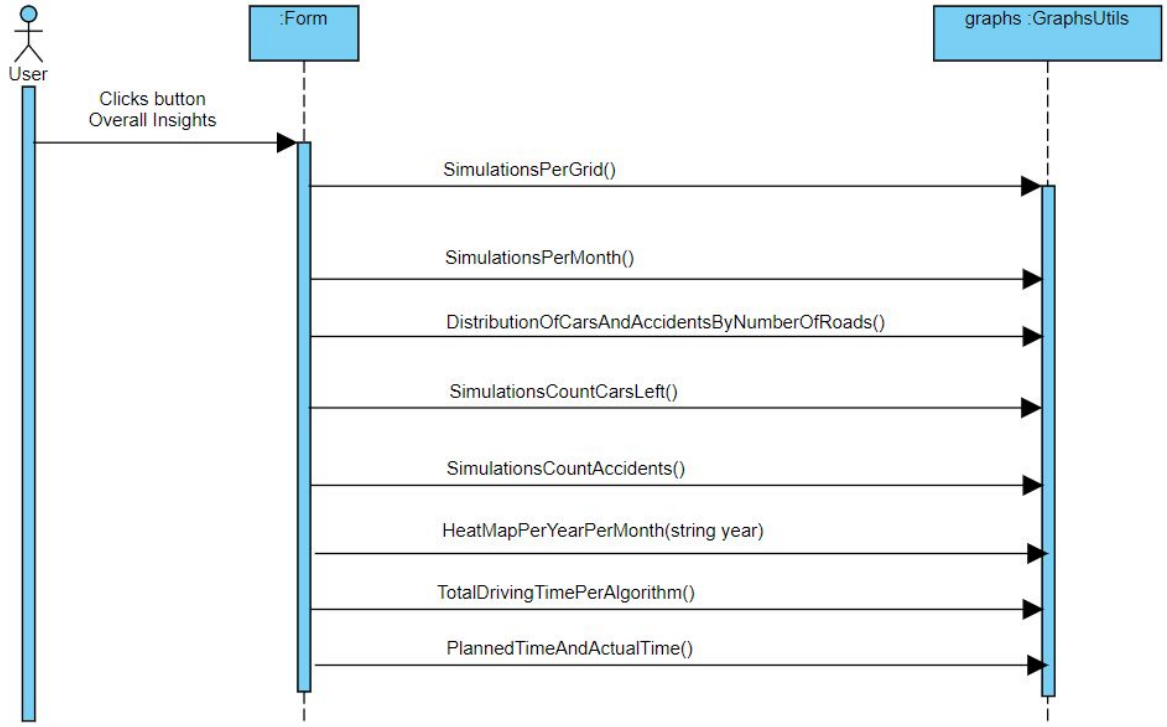


Choose shortest-path algorithm

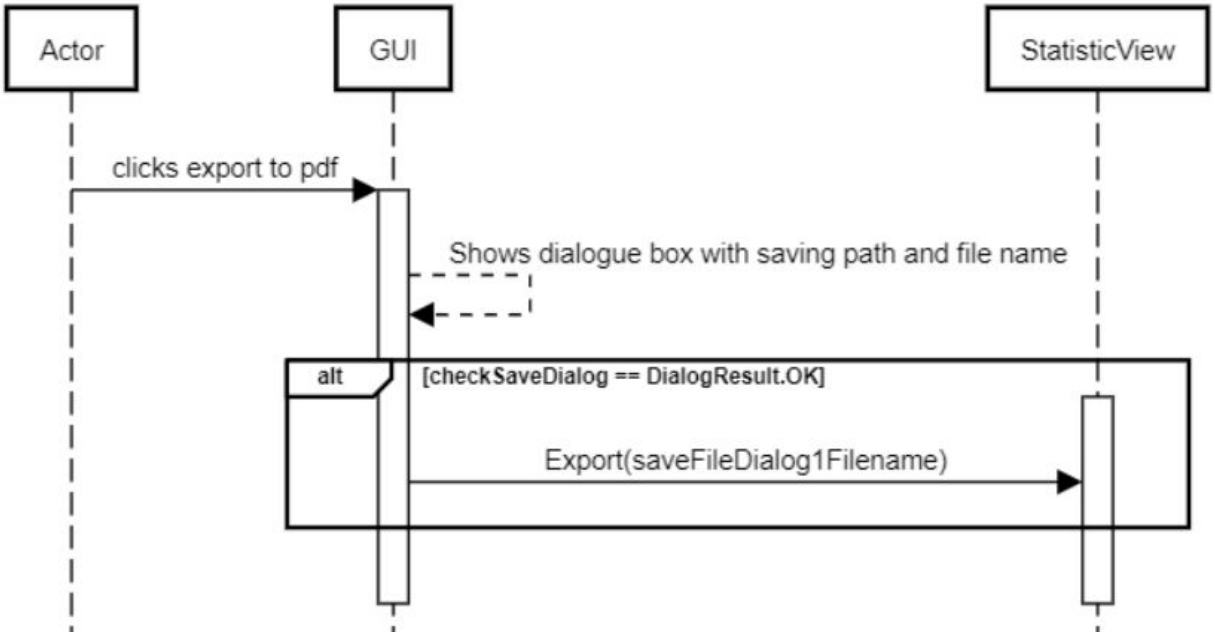



Statstics View Loading
User
GUI
MAIN FORM
STATISTICS VIEW
clicks a button
LoadStatisticsView()
show()

Show Overall Insights and Statistics



Export to PDF



UML Class Diagram