# Design Document Feedback and Reflection
# Group 8 Infinity

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## Purpose

Overall the purpose of the program stayed very much the same. As initially conceived, the program stills simulates the experience of driving a car with feedback, from a birds-eye view. The simulator still functions very similarly to a game as we originally intended. User can track various statistics about how they are driving through the widgets. One thing not initially defined, but became very apparent during the development process was that although the program behaviors similarly to a game, it is not designed for entertainment purposes, and is grounded in reality, unlike many true games. This does follow our initial purpose of keeping the game realistic enough and simple enough to use effectively.

## General Priorities

Our two main priorities before the implementation phase were the modules in the car and the feedback of driving from user input. Very quickly the priority of actually providing feedback of driving from user input surpassed the priority of modules. Since many of the modules prove meaningless without being able to have a moving car, we made it out absolutely number one priority to implement the visuals of driving, and this took up the bulk of our beginning stages of development. The technical priorities regarding the two main priorities were the car controller and car viewer. These proved both equally important to being able to see the car move, and giving it input to move, as well as the view and controls for the widgets.

## Requirements

Some requirements were determined to be unnecessary, or not worth the time and were removed after reassessment. The following requirements were removed
- Must include visual feedback associated with each input (e.g. wheel turning)
- Could only be able to go into reverse from park, not drive

## Major Design Issues

Due to time constraints, our major design issues established during design persisted. Given enough time, we would have been capable of solving these issues. Although adding a first person view would add a lot to the simulator, we decided that it would be too time consuming to simply add another option to view how you drive. We have updated our major constraint constrain from design regarding driving off road. Initially we intended to have no simple solution to user-errors such as driving off of the road. However during implementation we solved that issue by causing off road driving to cut speed in half, and driving into water causing the car to crash and reset at the beginning.

**Diagrams**

State Diagram - We realized our state diagram was not specific enough in defining what actions occurred to cause state transitions, so we added our state transitions. We also defined where the program starts and stop so it is clear where the program starts and finishes. We also removed the more detailed driving and reverse substate diagrams as they felt unnecessary.