What I completed

I have created a fully functional game that allows a player to walk around different parts of a city, acquiring items and going back home. There are different shops that the player must go to in order to acquire the necessary items. The player also has a car, so he can drive his car around the city to get to places faster, instead of moving one node at a time. The car runs on gas, which needs to be refilled when running low. The player can also give random goods acquired at stores to his mom for a little extra money if he doesn’t have enough to start. The game also comes with a “map” function which draws a representation of the entire city, and where the player is. The city contains points represented by a coordinate (you are at the point (1,0) in the city, etc…), and the player can move from place to place. Once acquiring all of the items, the player needs to go back home. If the player has all of the items once returning home, he can exit the game (a victory!)

Challenges

This was an extremely challenging project because of the architecture. It took me a long time to figure out how everything was going to work -- how was I going to allow the player to only see buildings at the point he’s at? How do I move from point to point? How do I generate these so that they can all exist independently, and the player can move freely to any point? This took me hours to figure out. I ended up creating a dictionary that stored all points with the position as the key: an elegant solution that made it very easy to switch locations fast. The next big problem that I faced was getting shops to work – I wanted all buildings to be part of a class, but I also wanted to have them have different types. In retrospect, I should have used inheritance, but the way I did it ended up working fine and only added a little bit more complexity. Another challenge for me was figuring out every edge case: there were SO many places where things could have gone wrong. IT was challenging to get a majority of them found, and I still may not have found all of them.

Features, Grading, and How to use the App

To use the app (if confused at any point) use the help command. It outlines all commands that can be used.

The main commands you will be using are:

* enter: shows all buildings and allows you to enter the building of your choosing. Enter the name of the building (case-sensitive!) to do so.
* Move: move in a direction you want to move in. You can check what directions are available by using the ‘moves’ command.
* Drive: Drive to a certain point on the map. The command is self explanatory in the app.
* Todo: Shows the items you still need and where they can be found.

To test the project, use the ‘todo’ command and try to complete the application. Everything should be self explanatory – the demo will help with seeing if it actually is or not.