

INDIVIDUAL ASSIGNMENT REFLECTION

This Individual assignment was quite the challenge for me. First, I created the `FileReadWrite.java` which includes a method that will read a file into an arraylist given the file path as parameter. I created objects for every csv file along with instance variables. The instance variables were the columns of each csv file. For each object, it had an array of arrays.

The `main.java` file is where I perform my tests with several print statements. For this file, it contains the main method where I created hashmaps for the airport csv file where the ID will be the key and the object as the value. I did this because at the end, the Uniform cost search will use the figures to find the optimal route between two places.

The main issue was the search and the Haversine formula. For the search, I used the uniform cost search in finding the optimal route between a city and a destination. The implementation was daunting, but was a bit easier since Dr. Korsah implemented it in python. For the Haversine formula, since I had no prior knowledge of the concept, I used an implementation from Jason Winn (I cited him in the code).

For the search, I wrote a generic problem class which represents any problem to be solved by searching. It includes an initial state or the city and goal state or the destination. I also wrote a node class which takes a state (airport ID), parent (previous node), action and path cost(cost of reaching the node).

Through this project, I have learnt a lot and solved many problems. I honestly don't think my code will produce the right solution path. But it was fun whilst doing it.