Development

Week 1: First we copied over the graph and edge code from lab_ml, and laid out the rest of the skeleton code for the project. tWe also wrote the Makefile to allow us to test code as we wrote it. Next we started working on reading the data files into the graph format. We are using the airports as the vertices and the routes as the edges. The edges are directed as given in the data source, and weighted using the distance between the airports. We are calculating this distance using the Haversine formula, which is not perfect as Earth is not exactly spheroid, but it is close enough for the realm of this project. We finished off the week by starting to develop test cases. We are noting down what test cases we intend to write on the README on github, then as we finish we will remove them and document them in the code. We are planning on starting test cases that ensure that basic graph creation from minimal data sets work, paying special attention to how our implementation of the haversine formula works for calculating distance.

Week 2: First we ironed out some bugs in the Makefile. We weren't able to 'make test' because of some bad linking, so we ensured that everything was included in the right spot. We cleaned the data. We tested our graph constructor by creating a random graph and ensuring that the vertices are connected as intended. We also tested that the vertices and routes were being read correctly from the data in the first place. We found that some of the airport names included commas, and since we were splitting the lines on commas it made out output incorrect. To solve this we replaced all non-splitting commas with a dash. This resulted in the correct graph being created.