**Intermediate Computer Programming**

**Reflective Report**

My code consisted of 5 classes, a node class, an airport class to represent the attributes of the airport, the airline class, and the route class. The airport class contains attributes from the dataset such as the city (The main city served by the airport), the country (The country the airport is in) and the IATA code (a unique code for the airport). The Airline class has a series of attributes such as the Airline ID, the name, the alias or nickname its goes by, the IATA and ICAO codes, as well as the callsign and its country. The route class contains the unique airline code, the source and destination airline codes and the respective costs. Each class contained a *Data\_Retrieve* method which extracted the relevant data from the respective csv files. The data from each file was stored in the HashMap with a key and an array list as the value. In each class:

**Airport**: The key was a combination of the city and country and the value was an array of airport ids.

**Airline:** The key was the Airline Id and the value was an array containing the name of the airline, the country they operate in and the active status.

Routes: The key in this was the airline ID and the values were an array list of the source airport ids, the destination ids and the number of stops.

The search algorithm used in this code was the breadth first search however I believe it is worth noting that I experienced quite a lot of struggles in implementing this search algorithm and my different tests resulted in several errors.

**References**

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