**Reflection**

This was a very insightful project. I learnt how to transfer my knowledge of data structures in python to Java. It helped me

I created 6 classes. Airline, Airport, DataReader, Node,Route and RouteFinder, all of which model their real world counterparts. The general idea was to use the RouteFinder class to read the csv files and generate objects for entry in the csv file. Thus objects were created for each Airline, Airport and Route entry, and then stored inside their respective hash maps to form a graph.  
 These hash maps were then used to perform a Breadth first search. I had initially tried to implement an A\* search, however I was only partially successful. My A\* could only find solutions with 1 or 2 flights. As such, I decided to switch to the BFS algorithm. I made the switch to BFS quite close to the deadline, and it was quite stressful. This taught me that I should always implement what I know and am comfortable with first, before trying something more advanced. Had I implemented my BFS first, I am certain I would have been able to get the A\* to work on my second attempt of the assignment.

Some test cases that I tried and know work are: “Sandane, Norway to Bangkok, Thailand” and “Accra, Ghana to Istanbul Turkey.” I referred to geeksforgeeks quite often for somethings that I had forgotten. For example the exact syntax for file reading and converting various data types to strings.

In retrospect, I would have done some things differently. For example, when creating the airport objects, I would not have read all the columns because some data was never used. This would have made reading the csv files a lot easier.

References

GeeksforGeeks. 2022. *GeeksforGeeks | A computer science portal for geeks*. [online] Available at: <https://www.geeksforgeeks.org/> [Accessed 1 October 2022].