**REFLECTIVE REPORT – Individual Project**

The individual project tasked me to write a program that, given a start, city outputs a series of flights that take a passenger from the start city to the destination city. I started by studying the CSV files that contained the database to accomplish the task given and its specifications. With the aid of flowcharts, I could visualize some of the different components of my program, and other needed parts were added as I was building my code. I then followed up by creating a project directory and a package and figured out the organization of the various files I needed. I applied the concepts of defining classes, fields, constructors, and methods to create blueprints of the objects I needed based on the database. I made use of the BuffredReader Class to open and read from the CSV files; to help me temporarily hold and manipulate the available data, I made use of ArrayLists and HashMaps. To efficiently store and organize the data for search, I used a HashMap data structure. This aspect of the project became challenging for me as to identifying the best algorithm to perform the task and how to integrate it with the data structure I had created for the program to use. I decided to use the breath-first search algorithm for the search aspect of the task to find all possible routes (flights) from a source airport to a destination airport. I made sure to document my solution with Javadoc. The last task I performed was to write a main method that includes console I/O which was needed so that the program could be executed by taking an input file name and generating the result in an output file. For this project, I researched how to implement the algorithm using a Udemy course on data structures and algorithms, and other online resources on Github were helpful when I was connecting my data structure to the database through the temporary collections used to store the data from the CSV files. In all, I think this project made me go out of my comfort zone.