Background of this project;

All of the c++ concepts we learned—such as defining classes, fields, constructors, methods in C++, and error handling—are applied in this project. The right kinds, including collections and justifiable data structures, are used. Implement fundamental technologies and algorithms. It serves as an example project for using Javadoc to document your software solution. Introduction (project specification) (project specification) It offers a database of airports, airlines, and routes. The objective of this project is to develop a computer program that, given a start city (such as Accra, Ghana) and a destination city (such as Winnipeg, Canada), generates a sequence of flights that transport a passenger from the start city to the destination city. A reliable route between the two cities should be determined by the software.

Methodology (Problem analysis and solution design)

I had to determine a correlation between the provided csv files and how to connect them. As a result, I began by examining the data provided; we were required to provide the user's originating country, city, and destination country, city. I only found this information in the Airport.csv file after looking all the csv files, so I started there. after gathering the user's information and eliminating the airports in both the user's current and destination countries and cities. Following that, I save this data as a vector. After considering how I could utilize this knowledge to determine the route, I finally discovered it. A column in the csv file contained the source airport ID and the destination airport ID. I obtained their airport IDs by looping over the Vector of the airports I had saved. I completed the route's loop at this point. csv file and compared the source airport ID and destination airport ID fields; if either returned true, a route between the two cities existed. I consequently saved them into a different Vector. The number of stops I obtained after looping over this Vector according to the Vector's size represents the total number of routes from the source to the destination country. For the total number of stops, I looped through the Vector and found the sum of all the stops.

Conclusion (lessons learnt from the project)

The application processes a two-line input file (start and the destination nations and cities) to produce the solution, which is then output as a three-line file (a numbered list of flights, total number of flights needed, and the total number of additional stops made on those flights). This project gave me the opportunity to hone my essential Java abilities and prepared me for next programming challenges (any programming problem is possible). I was able to gain practical experience from a useful individual project,

which helped me to develop my problem-solving, critical thinking, research, and analysis skills.

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