**Name: Miriam Uwingabiye**

**ID: 24422024**

**c++ project report**

Throughout the c++ project, we have been provided a database of airports, airlines, and routes.The Airport CSV file contains the information about airport ID, the name of the airport, the central city served by the airport, the location country of the airport, the 3-letter IATA code of the airport, the 4-letterICAO code of the airport, the latitude, longitude, altitude, timezone, Day saving time, database timezone, Type of the airport, and Source of this data. Routes CSV file contains the information about the code of the airline, Unique OpenFlights identifier for the airline, code of the source airport, Unique OpenFlights identifier for the source airport, code of the destination airport, Unique OpenFlights identifier for the destination airport, airport ID Codeshare, Number of stops on this flight, and 3-letter codes for plane type. The Airline CSV file contains information about the Unique OpenFlights identifier for this airline, Name of the airline, Alias of the airline, 2-letter IATA code, 3-letter ICAO code, Airline callsign, Country location of the airport, whether the airline is active.

As our task was to write a program that outputs a series of flights that take a passenger from the start city and country to the destination city and country, provided a start city and a country (e.g., Accra, Ghana) and a destination city and country (e.g., Winnipeg, Canada) by the user, to implement this, we used five C++ files which are airport, routes, airline, main, and GetPath.

The airport c++ file reads the airport CSV file. Then it extracts all the necessary information, mainly the central city served by the airport, the location country of the airport, and the 3-letter IATA code of the airport. This will be helpful to know that based on the arrival and departure country and city, this is the airport the passenger will arrive from and this is the airport the passenger is going to depart from. Route C++ file reads the route's CSV file. Then it extracts all the necessary information, mainly the departure and arrival points of various airlines, that will help us find the path a given airline takes from one point to another. The GetPath C++ file will help us write a valid path to the output file from one airport to another and the airlines. The main C++ file takes the input from the user and then writes it to the file and calls airport, routes, airline, and GetPath to carry out all the necessary functionality as intended and then, in the end, will write to the output file.