DATA STRUCTURES AND ALGORITHMS REPORT

Course Work 2

Flying Planner

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**FlyingPlannerMainPartA.java**

In this class, we are creating one graph with 5 vertices and each vertex is connected by Flight Info edge.

In this class, we are writing logic to calculate the least that means lowest price root between two airports.

**Journey.java**

In this class, we implement all the methods for journey operations.

1. get stops method to get all the airports in the journey as a list

2. get flights method to get the flights in the journey as list

3. getHop method to get the number of hops in the journey.

4.totalCost method returns the travelling cost.

5.airTime method to find the journey time on air.

6. connecting time method to get the halting time in the journey.

7. total-time method is the sum of above two times.

**Airport.java**

1. In this class, we are creating the required files for flight information.

and getter methods for code and name fields.

2. getDirectlyConnected method to add the directly connected airport to the list.

3. getDirectlyConnected method is for to get the directly connected flight set.

4. getDirectlyConnectedOrder to get the no of vertices in the set.

**Flight.java**

1. In this class, we are placing the required fields for flight info and place getter methods for all the fields.

**FlightReader.java**

This is the defined class by using this class we are reading the flight and airport information from the CSV files.

**FlyingPlanner.java**

1.populate methods for reading the data from CSV files and add to the sets for storing flight and airport information.

2.airport method is for getting the airport object by passing its code

3.flight method is for getting the flight object by passing its code

4.leastCost method to get least cost travel between two airports

**FlyingPlannerException.java**

It is a user-defined exception to throw in the abnormal case of the FlyingPlanner class.

**Screenshots:**

Part-A

A screenshot of a social media post

Description automatically generated

Part-B

A screenshot of a social media post

Description automatically generated