DATA STRUCTURES AND ALGORITHUM PROJECT REPORT:

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INTRODUCTION:

A data structure is a named location that can be used to store and organize data. And, an algorithm is a collection of steps to solve a particular problem. Learning data structures and algorithms allow us to write efficient and optimized computer programs.

OBJECTIVE:

You are writing a program for a courier service operating in 12 different cities as shown below in the graph. The idea is to deliver the courier in the minimum possible time. For that you need to get the shortest route for the delivery system. All cities are presented by the vertices, connected to each other through undirected and weighted edges. The weights with the edges shows some kind of representation of distance between the vertices.

PROJEC DELIVERABLES:

Identify the data structures which can be used to design this system. [SLO-5.1]

we used file handleing graphs hasing queque stacks and sorting techniques.

Compare the different data structures which are identified earlier and compare these data structures based

upon their Time Complexity. [SLO-5.2]

There are the may other type of data structures shiuld be used but we do simple and lesstime and space consuming with the help of calling.

Apply the selected and developed techniques in the design of system. [SLO-5.3]

we apply the graph represting techniques as we study in class we apply matrix representations graph.

Verify and suggest different data structures and algorithms which might lead to improve the quality of such

system in terms of Time/Space Complexity. [SLO-5.4, 11.4]

Here is a step-by-step plan to improve your data structure and algorithm skills:

Step 1: Understand Depth vs. ...

Step 2: Start the Depth-First Approach—make a list of core questions. ...

Step 3: Master each data structure. ...

Step 4: Spaced Repetition. ...

Step 5: Isolate techniques that are reused. ...

Step 6: Now, it's time for Breadth.

Discuss the limitations of Designed System:[SLO-5.5]

Find the shortest path from city X to city Y. Print the path on console. Your algorithm shouldn’t take more than.Find the shortest path from each city to the other cities and store in a data structure whose data access time is O(1). Print shortest path from city X to city Y in O(1).

Prepare a management plan to implement the project successfully and define the methods to control its execution. [SLO 11.1]

first we take input from txt file and then read from it and then we enter the vertices and then we represent the graph and disply and then we find the distance from ity x to city y and then we find shortest distance for city x to city y and then we slect the cost the courier which send fast take less time and adopt short path take more cost and courier which take less cost its sends from longer path.

Prepare a schedule which will show the time duration required to implement the different tasks of the

assigned project. [SLO 11.2]

we try to perform all tasks in less time and in range of given in our project.

Prepare a short description about which tasks are performed by the group members and depict the team

relationship while implementing the project. [SLO 11.5& 9.1]

We have two members of group but one member from my group is left but he work and helps me in doing the project mostly part of my code is done i have done to input in file displaying graph and matrix representations code. and he done find the shortest path with the help of trees.

Prepare a detailed report on the completion of project which will summarize all the relative information

related to different tasks of the project. [SLO-11.6]

My code is in complete and not working they have many erros in it and in my code i have try to input file set users request and then represents the graph and disply it on console lastly he finds the minimum distance and display on it.

ISSUES:

I have faced many issues while performing the tasks but with the help of internet i resolved it. CONCLUSION:

In this project we are able to perform reallife development with help of minium time and space after performing and doing these tasks we are able to perform these types of complex questions and how to solve them.