

SYNOPSIS

“Metro App”

APS Lab Project 4th Semester 2020



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TITLE: METRO APP

Objective of Metro App:

The main objective of the C++ Project on Metro App is to manage the details of Routes, Tickets, Fare, Metro information. It manages all the information about Routes, Stations, Metro, Routes. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Routes, Tickets, Stations, Fare. It tracks all the details about the fare , routes and metro.

Statement of the problem:

- Information about the route, departure time, arrival time, number of trains available and other such information.
- It allows the administrator to add, update and maintain the records of trains and their fare.
- User friendly interface to administrator and customer.
- User can know about a particular timing of the first and last metro train at particular station.
- User can search for any metro station and know its details like platforms gates contact numbers tourist spots near a particular metro station

Methodology of the problem:

- This project has two sections- Administrative and Customer section.
- Administrator has the rights to change the details of metro station, fare, timings, etc.
- Customer can search for trains connecting to two stations. They can check the fare of their journey.
- This project will use graph data structure Dijkstra's Algorithm for finding the shortest path between the two stations.
- This project will use adjacency list to store city map.
- This project will use BFS and DFS to search a particular station.

Hardware and Software Requirements:

S.No.	Name	Software
1.	Operating System	Any (Windows 10 (used))
2.	Editor and Compiler	VS Code Editor , CodeBlocks
3.	File Storage	Notepad

Algorithms and Data Structures used:

Sr. No.	Name	Used for
1.	Dijkstra's Algorithm	Finding Shortest Path
2.	Graph DS(Adjacency List)	Store City Map(Metro Stations)

Contributions that the project will be able to make:

- Provides the searching facilities based on various factors. Such as timetable, Stations, trains.
- To increase efficiency of managing the timetable.

Functionalities provided:

- 1.Provides the searching facilities based on various factors. Such as Routes, Fare, Metro.
- 3.It tracks all the information of Tickets, Stations, Booking Counter , etc.
- 4.Manages the information of Tickets.
- 5.Shows the information and description of the Routes, Fare and timings.
- 6.To increase efficiency of managing the Routes, Tickets.
- 9.Editing, adding and updating of Records is improved which results in proper resource management of Routes data.
- 11.Integration of all records of Metro.