OBJECT ORIENTED PROGRAMMING USING JAVA (CSET109)

BENNETT UNIVERSITY

TOPIC OF WORK: METRO-MATE

NAME OF THE TEAM: AMIGOS

TEAM MEMBERS & ROLES:

- **AKSHAY NEGI:** LOGIC BUILDING, FRONTEND & DEBUGGING.
- **ADITI CHATURVEDI:** CODING & BACKEND.
- **LAVEENA GUPTA:** FRONTEND & CODING.

❖ INTRODUCTION

MetroMate is an app designed for routing metro routes and booking tickets. It is available for both Android devices, and it provides real-time transit information for metro routes in Delhi. The app offers a variety of features that include route planning, live status updates, and step-by-step navigation. Users can also purchase tickets directly through the app. The app also allows you to set reminders for upcoming stations. It also provides real-time information about the availability of seats, and the estimated time of arrival of the next train. With MetroMate, you can easily plan your trip, get directions, and pay for your tickets, all from the convenience of your mobile device.

❖ SIGNIFICANCE OF WORK

- The main objective of this project is to provide an easy-to-use, accurate, and reliable application that makes it easy for users to plan their metro journeys and book tickets. The application should be user-friendly and provide real-time information about metro routes, schedules, and fares.

- **Features:**
  - Real-time metro route information
  - Real-time schedule information
  - Fare information
  - Ticket booking
  - Booking history
  - Push notifications for schedule changes and ticket booking confirmations.

❖ PROBLEM DEFINITION

- Difficulty in finding accurate and up-to-date information on metro routes and schedules: The app would provide users with real-time information, making it easy for them to plan their journey and find the most efficient route.
- Inconvenience of having to go to a physical ticketing counter or navigate a separate website to purchase tickets: The app would allow users to book and pay for tickets directly within the app, saving time and effort.
- Challenges in navigating the metro system: The app would provide step-by-step navigation and real-time updates, making it easier for users to navigate the metro system and stay informed of any delays or disruptions.

❖ TECHNOLOGY AND TOOLS

- Java for core code structures.
- Android Development for front-end development
- Javascript
- Google Maps API for mapping and routing functionality
- Firebase for real-time data storage and user authentication

❖ FINAL PRODUCT

**NOTE: MetroMate will look like this. (The picture used here will be not exact as MetroMate.)*

❖ CONCLUSION:

- The MetroMate Application is a useful tool for anyone who frequently uses metro services. It provides real-time information and makes it easy to plan journeys and book tickets. The application is being developed using the latest technologies and tested to ensure its accuracy and reliability. The application will be available for download on the Google Play Store.

❖ DATA COLLECTION & ANALYSIS

- The data will be collected and tested from a verified website e.g. (www.dmrc.com).

❖ DRAWBACKS & LIMITATIONS

- Limited data availability: Some metro systems may not provide real-time data on train locations and delays, which can make it difficult for users to plan their trips.
- Limited language support: Some metro routing apps may not support all languages, which can make it difficult for non-native speakers to use the app.
- Limited payment options: Some apps may only accept certain forms of payment, such as credit cards, which can make it difficult for users without these forms of payment to book tickets.
- Limited offline functionality: Some apps may require an internet connection to function, which can make it difficult for users to plan trips in areas with poor or no internet coverage.

❖ FUTURE PLANS

- We plan on affixing additional features like entertaining stuffs for spending time in metro, in-app wallet etc.