Geeky Solutions Learnathon 3.0

Pitch Deck

Team Name: NetNinjas

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TEAM INTRODUCTION

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Project Title: QR Code Based Metro Ticketing System

Introduction

We want to develop a QR code-based metro ticketing system that generates a unique QR code for users upon each visit. The system records the entry station when the user scans the QR code at the entry gate and tracks the exit station when the QR code is scanned again at the destination. Fares are calculated dynamically based on the distance traveled, and the charges are automatically deducted from users account balance.

User Features

1. Users must log in with their credentials to access the system.
2. Users can add funds to their account through an integrated payment gateway.
3. Users can generate a unique QR code for each trip.
4. Users can use the generated QR code to enter and exit the station.
5. Users can view detailed travel records, including entry/exit stations, travel time, and fare deductions.

Admin Features

1. Admins can manage stations by adding, updating, or removing station.
2. Admins can adjust fare rates based on travel distances.
3. Admins can monitor the entire system including income and passenger statistics.

Workflow

- **QR Code Generation:** The user generates a QR code through a mobile app or web platform before entering the station.
- **Entry Gate Interaction:** The QR code is scanned at the entry gate, and the system records the entry station and timestamp.
- **Exit Gate Interaction:** The QR code is scanned again at the exit gate, and the system records the exit station and timestamp.
- **Fare Calculation and Payment:** The system calculates the fare dynamically based on the distance between the entry and exit stations. The calculated fare is automatically deducted from the user's account.

Limitations

This system requires several components, including backend services, frontend interfaces, mobile applications, and station-based ticket verification. For simplicity, we have focused on developing the backend and frontend using the .NET framework.