Parking Lot Management System

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Purpose and Technologies

Purpose:

- Simplifies parking for both users and admins.
- Allows users to check and reserve available spots.
- Enables admins to manage parking inventory efficiently.

Technologies:

- Java: Manages user interactions and database connectivity
- MySQL: Stores user data, parking spots, and Reservations

Who it's For:

- Users: Can easily view, reserve parking spots
- Admins: Manage the parking inventory, add/remove spots, and release reservations.

Key Features

User Functions:

- Register, log in, view available spots, make reservations.

Admin Functions:

- Log in, add or remove parking spots, release reservations, view current reservations.

Main Focus: Demonstrate how users and admins interact with the system and manage reservations.

Demo Roadmap

Demo Outline

- Step 1: User Registration and Login
 - Demonstrates how users register and log in (We will only see the log in feature accounts have already been made).
- Step 2: Checking Available Spots
 - Show how users can view all available spots.
- Step 3: Making Reservations
 - Demonstrate how a user reserves a spot.
- Step 4: Admin Login and Spot Management
 - Show admin login and the ability to release reservations, add, and remove spots.

Goal: Show essential features from both user and admin perspectives, highlighting core functionalities.

Technical Highlights

Core Components:

- Java Application: Handles user actions, reservations, and admin controls.
- MySQL Database: Manages users, parking spots, and reservations, with real-time updates.

Why It Matters:

- Provides a reliable, easy-to-use solution for parking management.
- Ensures smooth functionality for both end-users and administrators.

Future Plans

Upcoming Enhancements:

- Implement payment processing.
- Develop a user-friendly graphical interface.
- Optimize for larger parking systems.

Vision: Transition into a full-stack application with real-time updates and broader functionality.