

Project Title: Parkour – parking service web application

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Scope of the System:

Problem Statement: -

Finding available parking spaces in crowded areas can be a challenging and time-consuming task for drivers. Additionally, there is a lack of a centralized platform for users to create and share parking spaces seamlessly.

Existing System: -

The current situation involves drivers relying on traditional methods to find parking spaces, which can be inefficient and frustrating. There is no standardized system for users to create and share information about available parking spaces.

Proposed System: -

The proposed system is a web application that facilitates a centralized and efficient parking management system. Users can check for the nearest available parking spaces, make payments for parking, and also contribute by creating and uploading information about parking spaces they own. The system will integrate Razorpay API for secure payment transactions.

Actors of the System: -

User/Driver:

- Can search for the nearest available parking spaces.
- Can make payments for parking through the integrated payment gateway.
- Can view and utilize parking spaces created by other users.

Parking Space Owner:

- Can create and upload information about their parking spaces.
- Has the option to set pricing and duration for parking.
- Receives notifications and updates on the utilization of their parking spaces.

Project modules: -

User Authentication:

Secure user registration and login functionality.

Parking Space Search:

Users can search for nearby available parking spaces based on location.

Booking and Payment:

Integration with Razorpay API for secure and convenient payment transactions.

Users can book and pay for parking slots.

Parking Space Creation:

Owners can create and upload details about their parking spaces.

Set pricing and duration for parking availability.

Notifications:

Users and owners receive notifications about successful bookings, payments, and updates on parking space availability.

Hardware and Software Requirements: -

Backend:

Node.js and Express for server-side development.

MongoDB for database management.

Frontend:

Angular for building the user interface.

Tailwind CSS for styling.

Payment Integration:

Razorpay API for secure payment transactions.

Hosting:

The application can be hosted on cloud platforms like AWS, Heroku, or others.

Security:

Implement secure authentication methods.

Ensure secure communication between the frontend and backend.

Expected Outcomes:**Improved Parking Experience:**

Users can find parking spaces more efficiently, reducing the time and frustration associated with searching for parking.

Increased Parking Space Visibility:

Parking space owners can reach a broader audience by sharing information about their spaces on the platform.

Convenient Payments:

Seamless and secure online payment transactions provide a hassle-free experience for users.

Overall, the project aims to create a user-centric and collaborative parking management system that enhances the overall parking experience for both drivers and parking space owners. The overall project is a web-based parking management system designed to address the challenges of finding and managing parking spaces in crowded areas. The system aims to provide a centralized platform where users can easily locate available parking spaces, make secure payments for parking, and allow individuals to contribute by creating and sharing information about their parking spaces.