

**Name of Department:** Urban Development and Urban Housing Department

**Problem Statement:** Identify available parking spaces at Bus Depots and within the City

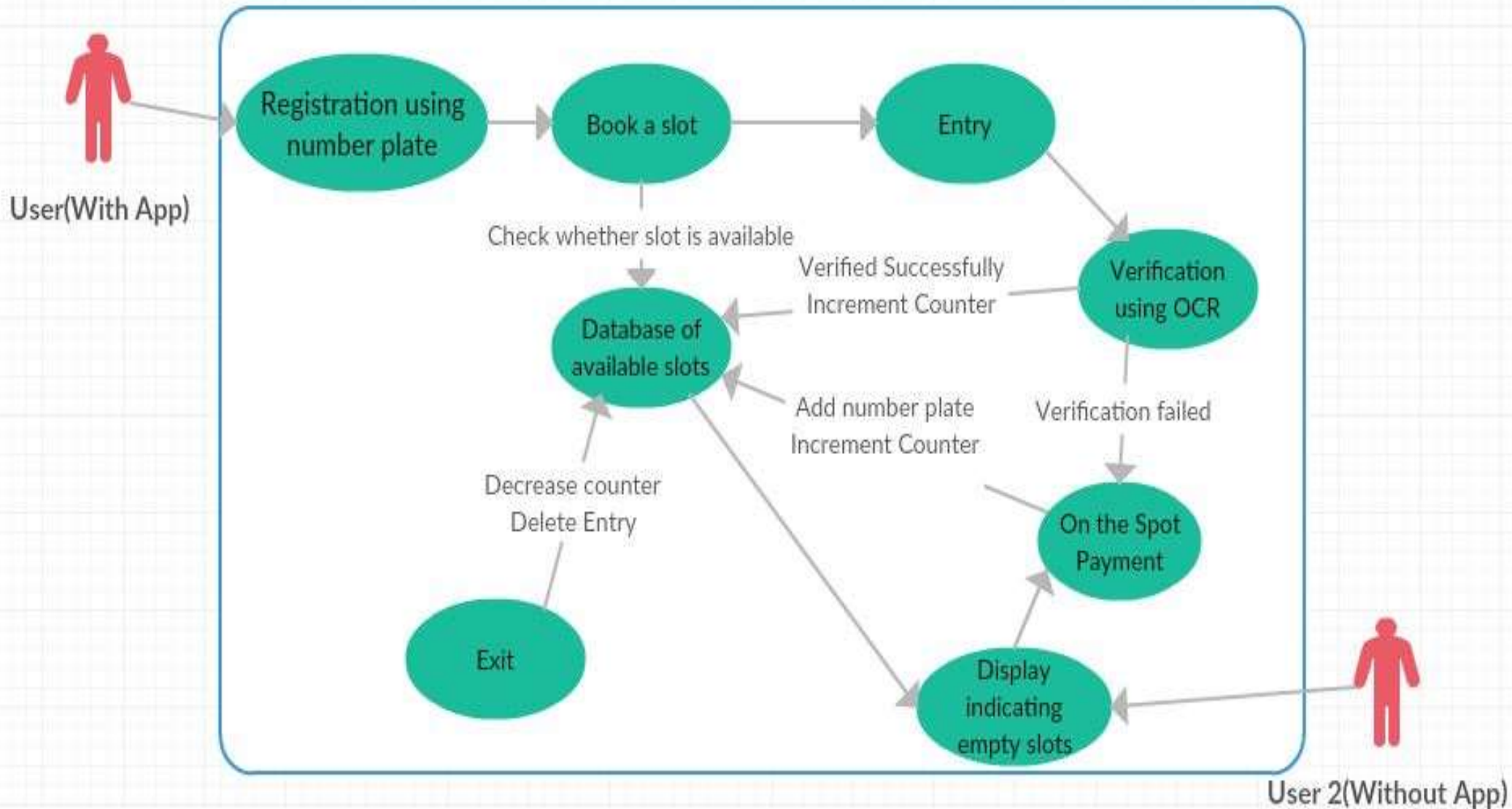
**Team Leader:** Hirva Patel

**Problem Code:** GH149

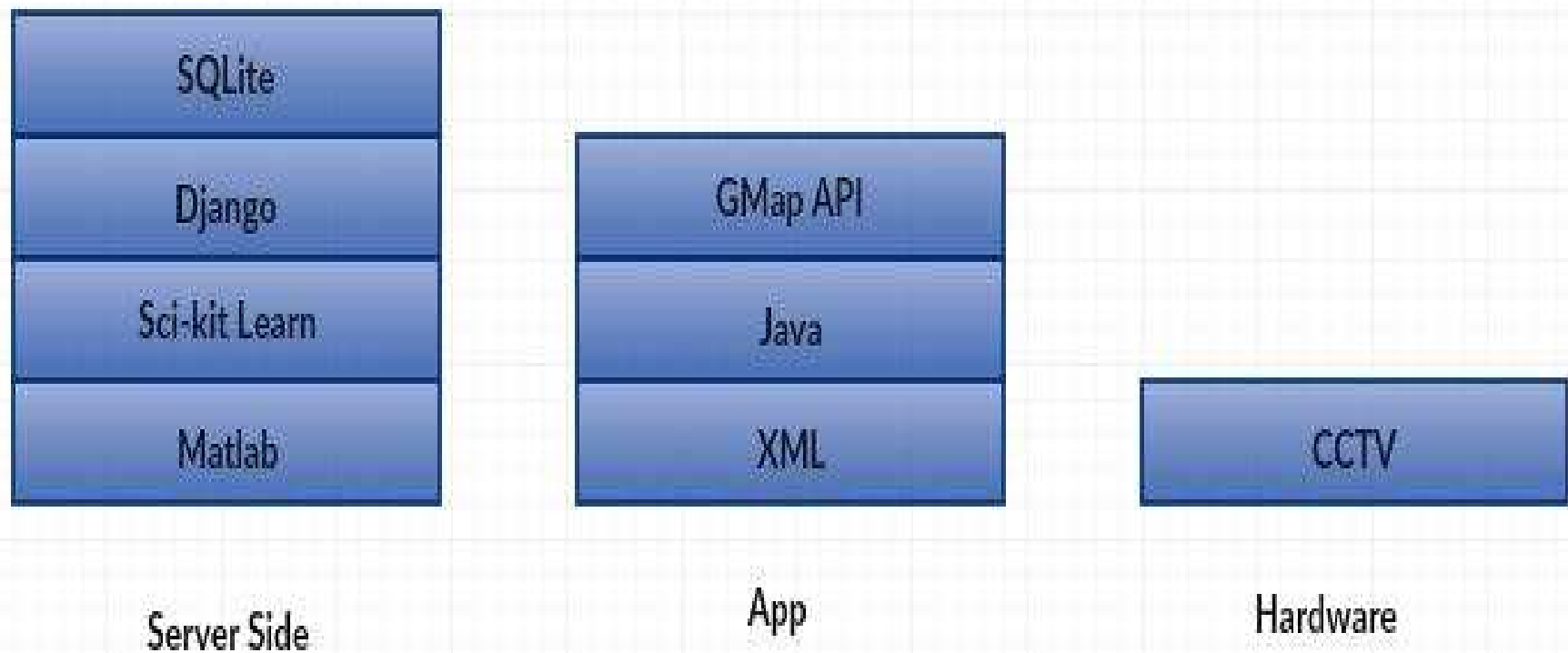
# Methodology

- An app which allows user to book a parking slot. App shows near by parking lots and number of parking spaces available at each parking lot.
- User uses vehicle registration number to create an account.
- Once the parking slot is booked, cameras at the entrance and exit of the parking lot will verify/identify car using OCR (optical character recognition).
- Thus, when a car enters, camera extracts the number of car and checks whether booking of that car number is done or not. If it is done, then the gate will allow entry and if the booking is not done, the user has to pay money to park the car.
- The parking area will also show the number of empty slots at entrance.
- We will keep track of maximum time that a vehicle will stay in the parking slot. Thus, this will allow us to handle waiting list bookings efficiently.

# Flow Diagram of Solution



# Technology Stack



# Outcomes

- Finding parking slots becomes super easy.
- Pre-booking of parking slots using app.
- Fully automated parking system with no requirement of guards.
- Can address waiting list customers also.

# Work Completed

- Frontend app interface designed to book the parking slot.
- Backend configured to work with frontend i.e. when user books a slot, count of empty slots is decremented.
- Verify/identify vehicle registration numbers using OCR (Optical character recognition).

# Screenshots/Links

- <https://github.com/NirajRajai/parking-sys>

