**Phase 2 project:**

**Project Title: Smart parking**

**Project ID:** proj\_223739\_Team\_4

**College:** Gnanamani College of Technology

**Branch:** B.Tech/Information Techology

**Year:** IIIrd

PHASE 2: PROJECT INNOVATION

**MODULE:**

1.Vehicle Detection and Entry/Exit Management:

○ This module uses sensors or cameras to detect vehicles entering and exiting the parking area. It records the time of entry and exit for each vehicle.

2.Surveillance:

○Cameras and security systems ensure the safety of vehicles and users. They can also be used for license plate recognition

3. Parking Space Monitoring:

○Sensors are used to monitor the occupancy of individual parking spaces. This information is crucial for real-time availability updates. **Round Robin algorithm** used for reduce traffic control.

4.Reservation and Booking System:

○Users can reserve parking spaces in advance through a mobile app or website, ensuring they have a spot when they arrive.**Breathe first algorithm** help to find closest available parking space.

5.Alerts and Notifications:

○Users can receive notifications about their parking reservation, availability updates, and payment receipts through email or SMS

6.Payment and Billing:

○ This module handles payment processing, including options for hourly rates or pre-paid bookings. Users can pay through various methods, such as mobile apps, credit cards, or RFID cards.

7.Distance Calculation:

○ Software algorithms are used to calculate the precise distance between the vehicle and the parking spot based on the sensor data. The choice of algorithm depends on the type of sensors and the desired accuracy.

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