A smart parking system

Part-2

1. **Sensor Deployment:**

 Install sensors (e.g., ultrasonic or magnetic sensors) in each parking space to detect vehicle presence.

2. **Data Communication:**

Connect these sensors to a central control unit using wireless communication protocols like Wi-Fi, LoRa, or NB-IoT.

3. **Data Processing:**

 The control unit collects data from the sensors and processes it to determine the occupancy status of each parking space.

4. **User Interface**:

Create a user-friendly interface, which can be a mobile app or a web application, to display real-time parking availability information to users.

5. **Data Storage:**

Store the parking data in a database for historical analysis and reporting.

6. **Payment Integration:**

If required, integrate a payment system to allow users to pay for parking through the app.

7. **Notifications**:

Implement notifications to alert users when their parking time is about to expire or when they need to move their vehicle due to time restrictions.

8. **Admin Control:**

 Provide an administrative interface for parking management staff to monitor the system, view reports, and make adjustments as needed.

9. **Analytics**:

Implement data analytics to gather insights into parking patterns, which can be useful for optimizing parking space allocation.

10. **Security**:

Ensure data security and privacy by encrypting data and implementing access controls.