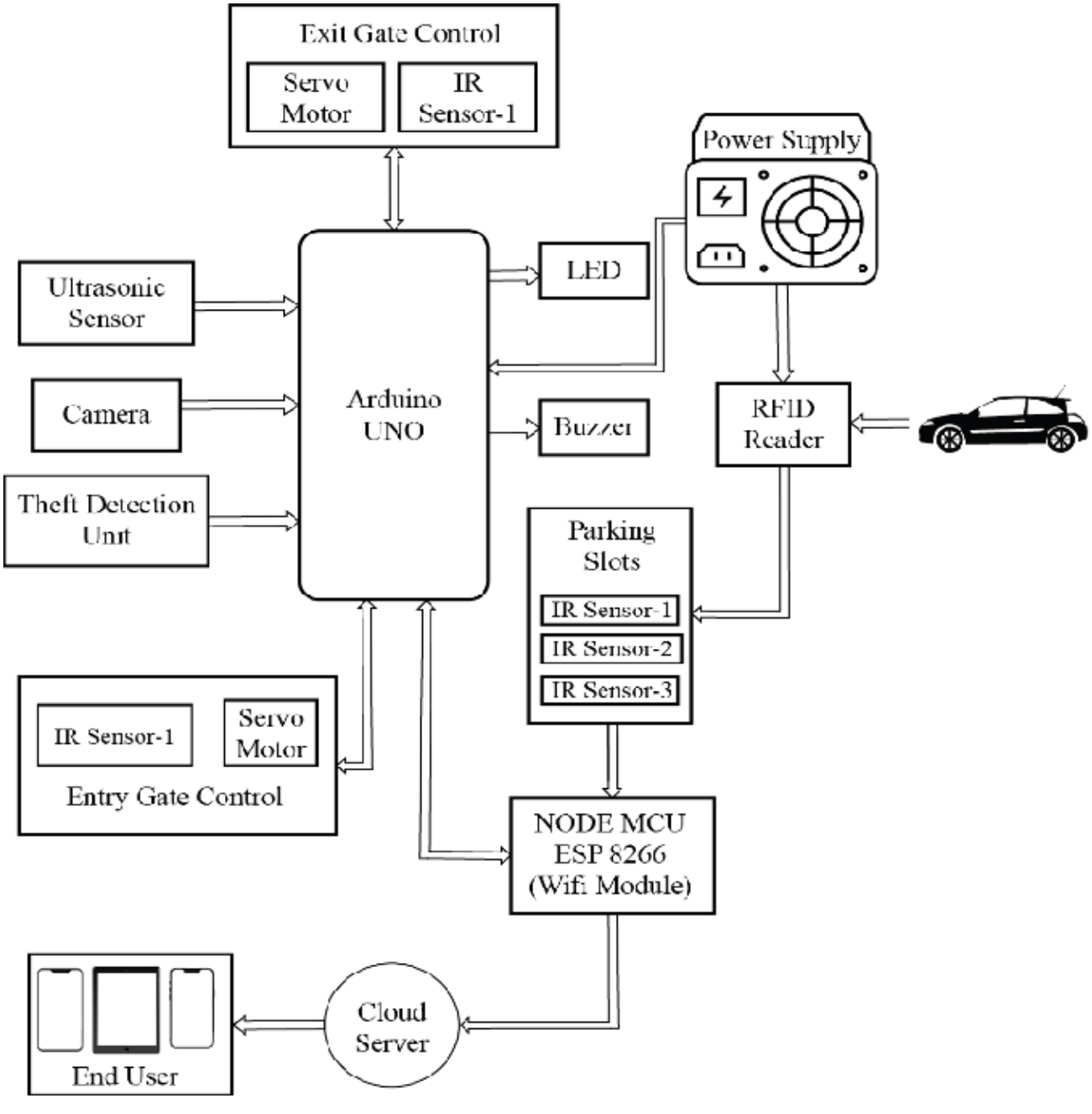
Smart parking

Project objectives:Efficient Space Utilization: To maximize the utilization of parking spaces, ensuring that vehicles are parked optimally, reducing congestion, and minimizing the need for additional parking infrastructureReducing Traffic Congestion: By guiding drivers to available parking spots, smart parking systems can help reduce traffic congestion and associated environmental impacts.For parking operators, smart parking can be a source of revenue through fees for parking services.Environmental Benefits: Reducing unnecessary circling for parking spots can lead to lower emissions and improved air quality.

Block diagram:



Project Flow:

Project Planning:Define the project objectives and scope.Identify the target location(s) for implementing smart parking.Establish a budget and timeline.Sensors and Infrastructure Setup:

Install sensors in parking spaces or entry/exit points to monitor occupancy.

Set up a wireless communication network (e.g., Wi-Fi, IoT) to connect sensors to a central system.

Data Collection:Collect real-time data from parking sensors, including space occupancy and availability.

Data Processing:Process and analyze the data to determine parking space availability and occupancy trends.

User Interface Development:Create a user-friendly interface, such as a mobile app or website, to display parking availability information to users.

Include features like maps, navigation, and payment options.

Payment Integration:Integrate payment gateways to allow users to pay for parking through the app or website.

Notifications and Alerts:Implement notifications and alerts to inform users of available parking spaces or when their parking time is about to expire.