**Title**: SMART CAR PARKING SYSTEM

**Group Members:**

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**Development:**

This project is developed as a part of academic requirement in the financial year 2022-2023

**Development Stage:**

The smart car parking model designed has four stages.

STAGE 1 OF THE MODEL

The “Entrance and Exit” of the car parking system is designed in the first stage. The Entrance and Exit of the system will be controlled by two IR Sensor and 1 9V SG Servo motor.

STAGE 2 OF THE MODEL

The “LCD Display” is used in this stage. It Shows the number slots which are vacant for parking and number of slots which filled.

STAGE 3 OF THE MODEL

The “Allotment of Slots” system is designed in this stage. Here 6 IR sensors are used for the allotment of slots. It senses whether the car is parked or not.

STAGE 4 OF THE MODEL

In this stage if all the slots are filled so no more cars can be parked. So the “LCD” shows the message “Sorry Parking Is Full” and “IR” sensor do not open the “Entrance”.

**Sector/Domain:**

The Smart Car Parking System Is the Basic Idea to reduce the society jam that occurs in and around the metropolitan areas scheduled by vehicles looking for parking. The anticipated scheme is the amalgamation of smart parking and the slot allotment through the network appliance.

**Problem and its relevance:**

Without getting knowledge of empty slots cars enter in parking areas and create traffic. Vehicles looking for a parking space causing long queues, congestion, pollution. Wastage of time and fuel is the major problem as parking with queues and congestion takes much time without knowing the parking is full or empty. Also when car enters the parking area and do not get the empty slot it revolves around the parkin area leading to traffic and congestion.

**Solution:** The smart parking provides a wireless access to the system and the user can keep a track of the availability of the parking area. Efficient and smart way to automate the management of the parking system that allocates an efficient parking. The user usually wastes his time and efforts in search of the availability of the free space in a specified parking area. The parking information is delivered via LCD which is embedded at the entrance of the parking. Thus, the waiting time for the user in search of parking space is minimised.

**Uniqueness:**

1**)SMART PARKING**

smart parking system is the key solution to reduce the waste stage of the fuel. The solution for the problems that is being raised. The smart parking can be a solution to minimise user’s time and efficiency as well as the overall cost of the fuel burnt in search of the parking space. In this, the data is collected from the sensor and through analysing and processing, the output is obtained. One goal of Smart Parking is to reduce the time taken and the hassle factor of locating an available parking space. Being able to accurately direct a driver to an available space has many environmental benefits; it reduces CO2 emissions, noise and other pollutants.

2**)SECURITY SYSTEM**

Smart parking monitoring, controlling and management solutions based on the integration of InfraRed Sensor. The proposed model provides real-time information for detecting parking lots and reservation, to mitigate traffic congestion, parking management optimization and enhance user experience while preserving user privacy and security.

**The main uniqueness of this prototype is that its budget friendly.**

**Features:**

Allotment of slots

20\*4 LCD display to display slots

Automatic Entrance and Exit.

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