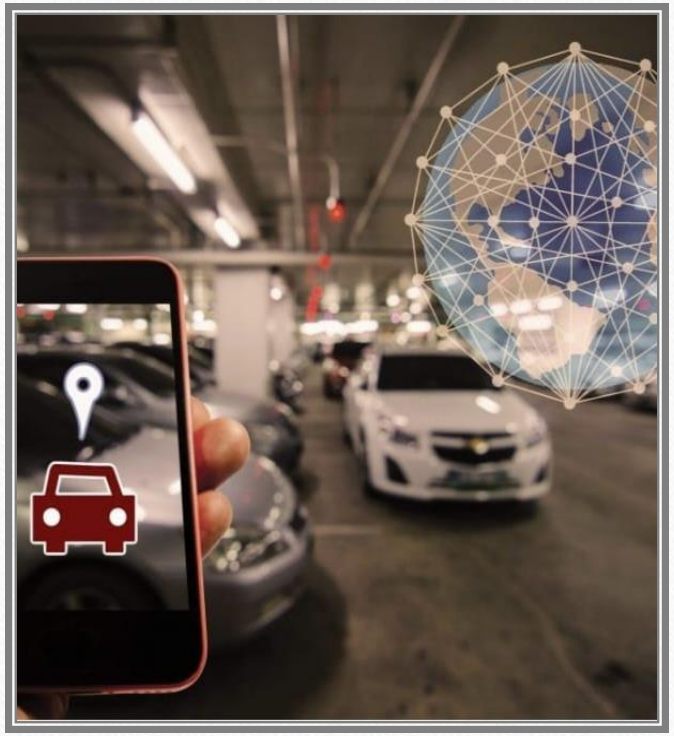
SMART PARKING



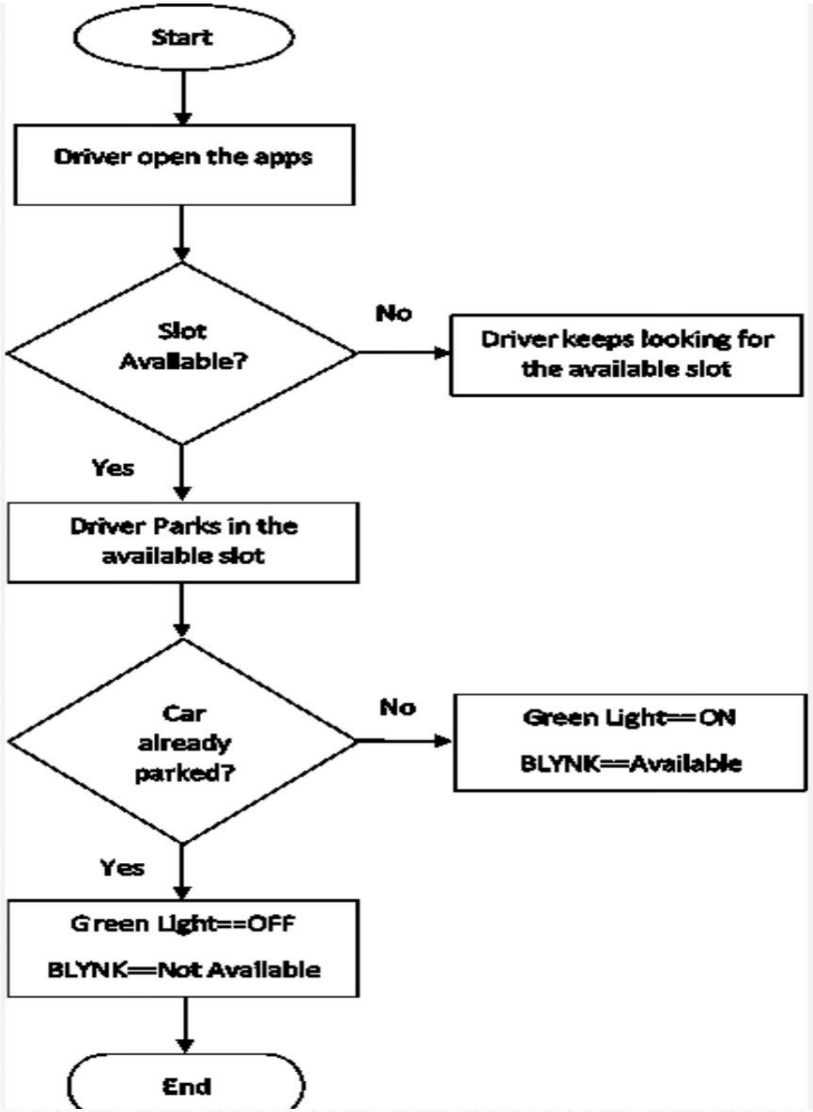
- **Team Name:** *Six Musketeers*
- **Team Leader Name:** *K Sruthi*
- **Institute Code:** *D2-SWEC*
- **Institute Name:** *SRIDEVI WOMENS ENGINEERING COLLEGE*
- **Idea/Approach Details**: In present days finding parking in busy areas is very hard and there is no system to get the details of parking availability online. Imagine if you can get the parking slot availability information on your phone and you don't have to roam around to check the availability. This problem can be solved by the IoT based Smart Parking System.

Problem statement

- Using the IoT based parking system you can easily access the parking slot availability over the internet.
- This system can completely automate the car parking system.
- From your entry to the payment and exit all can be done automatically.
- It eliminates the unnecessary travelling of the vehicles across the filled parking slots in the city.
- It reduces the pollution, traffic and saves time.

Solution/Prototype

- So here we are building an IOT based Car Parking System
- Using NodeMCU, five IR sensors, and two servo motors.
- Two IR snsors are used at entry and exit gate to detect the car while three IR sensors are used to detect the parking slot availability
- Here we are using the Adafruit IO platform to show publish the data on cloud which can be monitored from anywhere in the world
- IR sensors and Servo motors are connected to the NodeMCU
- NodeMCU controls the complete process and sends the parking availability and parking time information to Adafruit IO so that it can be monitored from anywhere
- Another three IR sensors are used to detect if the parking slot is available or occupied and send the data to NodeMCU
- Adafruit IO dashboard also has two buttons to manually operate the entry and exit gate
- So, this is how we can reduce the time of a driver for parking the vehicle and get the details of parking availability online



Flow Chart
Simulated Image of Prototype

TECHNOLOGY STACK

- Using internet of things
- Hardware components
- NodeMCU ESP8266
- IR Sensors
- Servo motor
- Online services
- Adafruit IO

Team Members Details

S.NO	NAME OF TEAM MEMBERS	BRANCH	STREAM	YEAR	POSITION IN TEAM
1	K SRUTHI	Btech	IT	2nd	Team Leader/Web developer
2	M BHAVANA	Btech	CSE	2nd	Web developer
3	KLS PRIYANKA	Btech	ECE	2nd	Program developer
4	A SWATHI	Btech	IT	2nd	App developer
5	B ANISHA	Btech	IT	2nd	App developer
6	B ANKITHA	Btech	IT	2nd	Hardware assembler

Mentors

S.NO	NAME OF THE MENTOR	CATEGORY	EXPERTISE	DOMAIN EXPERIENCE
1	AKSHAY KUMAR	ACADEMIC	Smart vehicles, internet of things	
2	RACHA SREEDHAR	ACADEMIC	Smart vehicles	21 years

Thank You