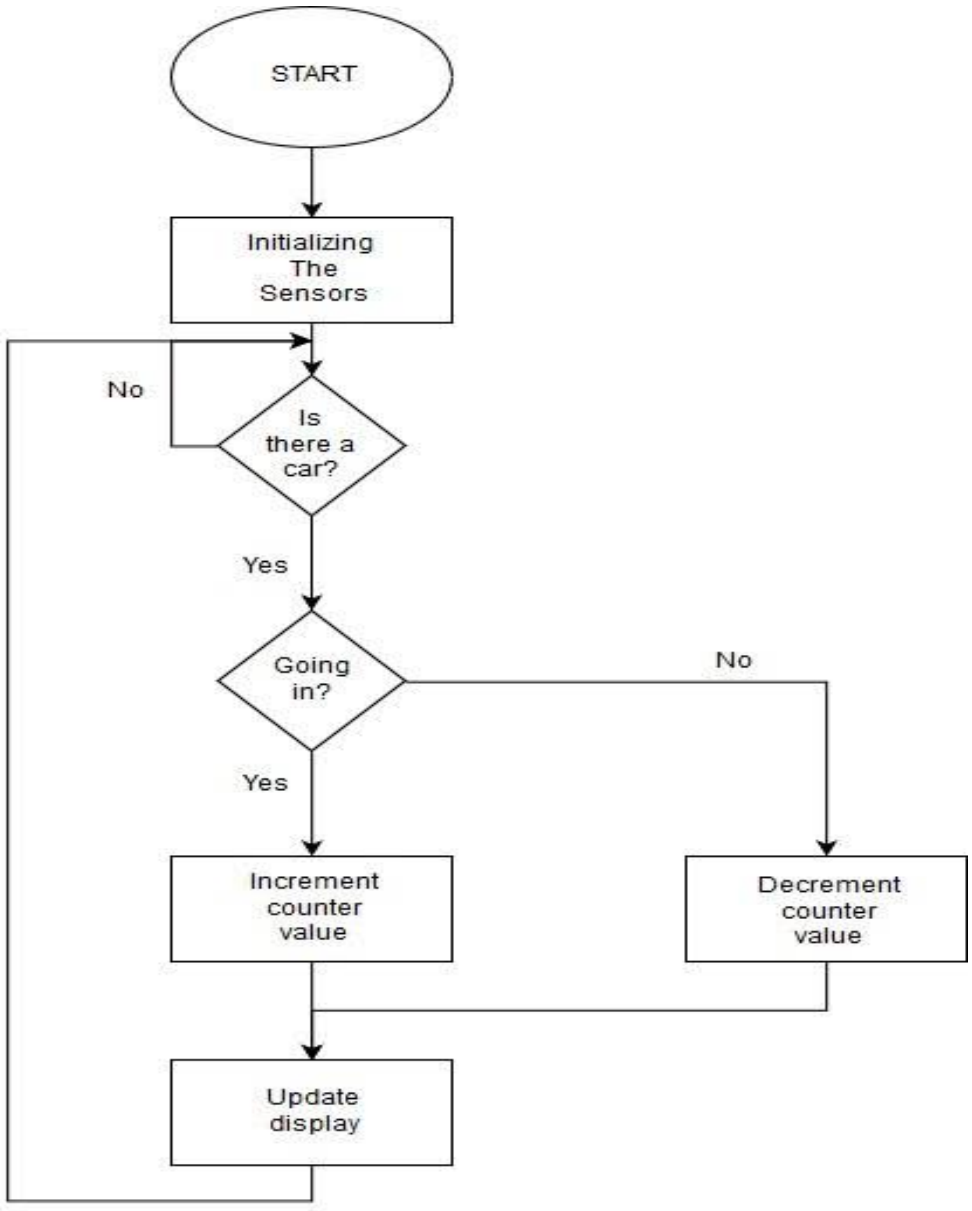
PHASE-3 ASSESSMENT

IOT Based Smart Car Parking System

INTRODUCTION:

In this technology project we will begin building our project by deploying IOT devices and then developing a python script on the IOT devices as per the project requirement.

FLOW CHART:



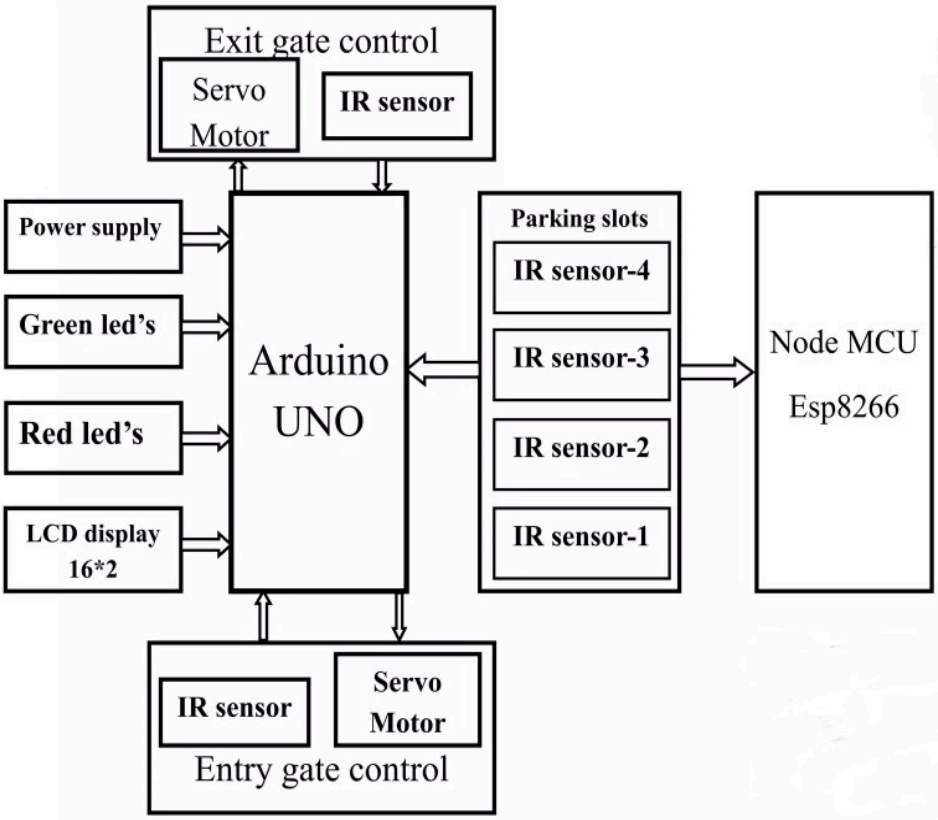
PROGRAM:

```
//PYTHON SCRIPT
#include <LiquidCrystal_I2C.h>LiquidCrystal_I2C LCD (0x3F, 16, and 2);
 //Change the HEX address
#include <Servo. h>
Servo myservo1;
Int IR1 = 2;
Int IR2 = 4;
Int Slot = 4;          //Enter Total number of parking Slots
Int flag1 = 0;
Int flag2 = 0;
Void setup ()
 {
LCD.begin ();
LCD.backlight ();
Pin Mode (IR1, INPUT);
Pin Mode (IR2, INPUT);
myservo1 .attach (3);
myservo1.write (100);
LCD.setCursor (0, 0);
LCD. print ("     ARDUINO    ");
LCD.setCursor (0, 1);
LCD. print (" PARKING SYSTEM ");
Delay (2000);
LCD. clear ();
}
```

```
Void loop ()
{
If (digital Read (IR1) == LOW && flag1==0)
{
If (Slot>0)
{
flag1=1;
If (flag2==0)
{
myservo1 .write (0);
 Slot = Slot-1;
}
}
Else
{
LCD.setCursor (0, 0);
LCD.print ("    SORRY    ");
LCD.setCursor (0, 1);
LCD. print (“Parking Full");
Delay (3000);
LCD. clear ();
}
}
If (digital Read (IR2) == LOW && flag2==0)
{
flag2=1;
```

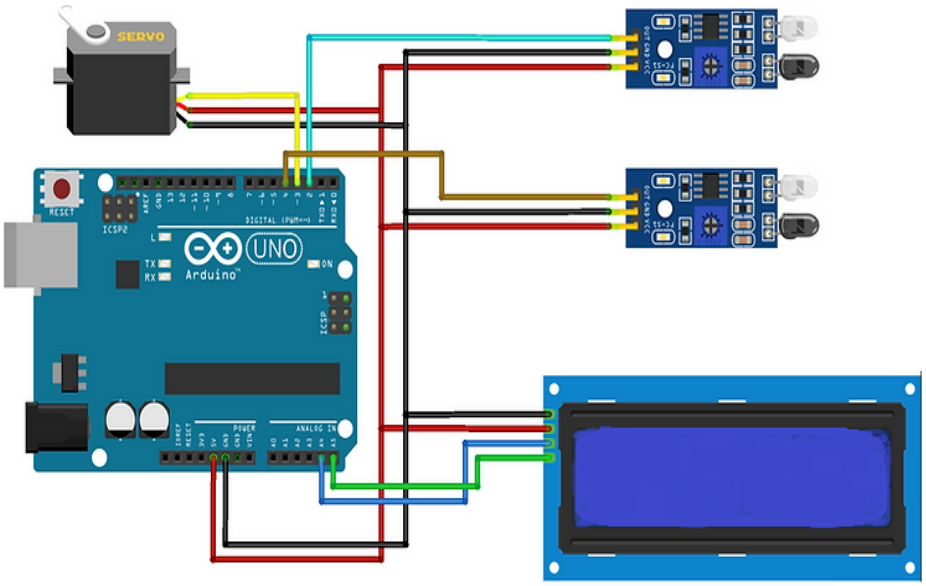
```
If (flag1==0)
{
myservo1. Write (0);
 Slot = Slot+1;
}
}
If (flag1==1 && flag2==1)
{
Delay (1000);
myservo1.write (100);
flag1=0, flag2=0;
}
LCD.setCursor (0, 0);
LCD.print ("    WELCOME!    ");
LCD.setCursor (0, 1);
LCD. print ("Slot Left: ");
LCD. print (Slot);
}
```

CIRCUIT DIAGRAM:



HARDWARE DESIGN:

c



CONCLUSION:

Implementation a smart car parking system through IOT technology offers numerous benefits, including enhanced efficiency, convenience, and sustainability. This system leverages real-time data collection and analysis to optimize parking operations, reduce congestion, and improve the overall user experience.