```
#include <Servo.h>
#include <Wire.h>
#include<LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27,16,2);

Servo myservo;

#define ir_enter 2
#define ir_back  4

#define ir_car1 5
#define ir_car2 6
#define ir_car3 7
#define ir_car4 8


int S1 = 0, S2 = 0, S3 = 0, S4 = 0;
int flag1 = 0, flag2 = 0;
int slot = 4;

void setup() {
  Serial.begin(9600);

  pinMode(ir_car1, INPUT);
  pinMode(ir_car2, INPUT);
  pinMode(ir_car3, INPUT);
  pinMode(ir_car4, INPUT);

  pinMode(ir_enter, INPUT);
  pinMode(ir_back, INPUT);

  myservo.attach(3);
```

```
 myservo.write(100);


 lcd.init();
 lcd.backlight();
 lcd.setCursor (0,0);
 lcd.print("       AIT      ");
 lcd.setCursor (0,1);
 lcd.print("DEPT OF E&C ENGG");
 delay (5000);
 lcd.clear();
 lcd.setCursor (0,0);
 lcd.print("   SMART CAR   ");
 lcd.setCursor (0,1);
 lcd.print(" PARKING SYSTEM ");
 delay (5000);
 lcd.clear();
 lcd.setCursor (0,0);
 lcd.print("  PRESENTED BY  ");
 delay (5000);
 lcd.clear();
 lcd.setCursor (0,0);
 lcd.print("Kusuma J,Sneha R");
 lcd.setCursor (0,1);
 lcd.print("  M B Sinchana  ");
 delay (5000);
 lcd.clear();

 Read_Sensor();

 int total = S1 + S2 + S3 + S4;
 slot = slot - total;
}
```

```
void loop() {

  Read_Sensor();


  lcd.setCursor (0, 0);
  if (S1 == 1) {
    lcd.print("S1:Full ");
  }
  else {
    lcd.print("S1:Empty");
  }

  lcd.setCursor (8, 0);
  if (S2 == 1) {
    lcd.print("S2:Full ");
  }
  else {
    lcd.print("S2:Empty");
  }


  lcd.setCursor (0, 1);
  if (S3 == 1) {
    lcd.print("S3:Full ");
  }
  else {
    lcd.print("S3:Empty");
  }

  lcd.setCursor (8, 1);
  if (S4 == 1) {
```

```
  lcd.print("S4:Full ");
}
else {
  lcd.print("S4:Empty");
}


if (digitalRead (ir_enter) == 0 && flag1 == 0) {
  if (slot > 0) {
    flag1 = 1;
    if (flag2 == 0) {
      myservo.write(0);
      slot = slot - 1;
    }
  } else {
    lcd.setCursor (0, 0);
    lcd.print(" Sorry Parking ");
    lcd.setCursor (0,1);
    lcd.print("      Full    ");
    delay(1500);
  }
}

if (digitalRead (ir_back) == 0 && flag2 == 0) {
  flag2 = 1;
  if (flag1 == 0) {
    myservo.write(0);
    slot = slot + 1;
  }
}

if (flag1 == 1 && flag2 == 1) {
  delay (1000);
```

```
    myservo.write(100);
    flag1 = 0, flag2 = 0;
  }

  delay(1);
}

void Read_Sensor() {
  S1 = 0, S2 = 0, S3 = 0, S4 = 0;

  if (digitalRead(ir_car1) == 0) {
    S1 = 1;
  }
  if (digitalRead(ir_car2) == 0) {
    S2 = 1;
  }
  if (digitalRead(ir_car3) == 0) {
    S3 = 1;
  }
  if (digitalRead(ir_car4) == 0) {
    S4 = 1;
  }

}
```