#include <Wire.h>

#include <LiquidCrystal.h>

#include <Servo.h>

// Set the LCD address to 0x27 for a 16 chars and 2 line display

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

Servo myservo1;

int IR1 = 6;

int IR2 = 7;

int Slot = 4; //Enter Total number of parking Slots

int flag1 = 0;

int flag2 = 0;

void setup() {

// initialize the LCD

lcd.begin(16,2);

// Turn on the blacklight and print a message.

pinMode(IR1, INPUT);

pinMode(IR2, INPUT);

myservo1.attach(8);

myservo1.write(100);

lcd.setCursor (0,0);

lcd.print(" SMART ");

lcd.setCursor (0,1);

lcd.print(" PARKING SYSTEM ");

delay (2000);

lcd.clear();

}

void loop(){

if(digitalRead (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(digitalRead (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);

}