Arduino Car Parking System Code:

```
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <Servo.h>

LiquidCrystal_I2C lcd(0x3F, 16, 2); // Change the HEX address
Servo myservo1;

int IR1 = 2;
int IR2 = 4;

int Slot = 4; // Enter the total number of parking slots

int flag1 = 0;
int flag2 = 0;

void setup()
{
  lcd.begin(16, 2); // Corrected LCD initialization
  lcd.backlight();
  pinMode(IR1, INPUT);
  pinMode(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 (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);
  delay(500); // Added delay to avoid rapid LCD updates
}
```