/\*Written by Pat McMahon 19/1/2019

 \* A023-Animated Disk-Infrared

\*from Pat's IR Robot

\*1/9/2018

 \*/

#include <IRremote.h>

const int kPinLed1 = 2;

const int kPinLed2 = 3;

const int kPinLed3 = 4;

const int kPinLed4 = 5;

const int kPinLed5 = 6;

const int kPinLed6 = 7;

const int kPinLed7 = 8;

const int kPinLed8 = 9;

const int kPinLed9 = 10;

const int kPinLed10 = 11;

int delayTime=300;

int forwards():

int backwards();

int left();

int right();

int halt();

const int RECV\_PIN = A4;

IRrecv irrecv(RECV\_PIN);

void setup()

{

 pinMode(kPinLed1, OUTPUT);

 pinMode(kPinLed2, OUTPUT);

 pinMode(kPinLed3, OUTPUT);

 pinMode(kPinLed4, OUTPUT);

 pinMode(kPinLed5, OUTPUT);

 pinMode(kPinLed6, OUTPUT);

 pinMode(kPinLed7, OUTPUT);

 pinMode(kPinLed8, OUTPUT);

 pinMode(kPinLed9, OUTPUT);

 pinMode(kPinLed10, OUTPUT);

 irrecv.enableIRIn(); // Start the receiver

}

void loop()

{

 decode\_results results;

 if (irrecv.decode(&results)) // if there is an IR reading

 {

 Serial.println(results.value, HEX);

 switch (results.value)

 {

 case 0x2F0:

 //Serial.println("Forwards!");

 forwards();

 break;

 case 0xAF0:

 //Serial.println("Backwards!");

 backwards();

 break;

 case 0x2D0:

 //Serial.println("Left!");

 left();

 break;

 case 0xCD0:

 //Serial.println("Right!");

 right();

 break;

 case 0xA70:

 //Serial.println("Stop!");

 halt();

 break;

 }

 irrecv.resume(); // Receive the next value

 }

}

void forwards()

{

 // turns on/off opposites in clockwise order

 digitalWrite(kPinLed1, HIGH);

 digitalWrite(kPinLed6, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed1, LOW);

 digitalWrite(kPinLed6, LOW);

 delay(delayTime);

 digitalWrite(kPinLed2, HIGH);

 digitalWrite(kPinLed7, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed2, LOW);

 digitalWrite(kPinLed7, LOW);

 delay(delayTime);

 digitalWrite(kPinLed3, HIGH);

 digitalWrite(kPinLed8, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed3, LOW);

 digitalWrite(kPinLed8, LOW);

 delay(delayTime);

 digitalWrite(kPinLed4, HIGH);

 digitalWrite(kPinLed9, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed4, LOW);

 digitalWrite(kPinLed9, LOW);

 delay(delayTime);

 digitalWrite(kPinLed5, HIGH);

 digitalWrite(kPinLed10, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed5, LOW);

 digitalWrite(kPinLed10, LOW);

 delay(delayTime);

 digitalWrite(kPinLed1, HIGH);

 digitalWrite(kPinLed6, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed1, LOW);

 digitalWrite(kPinLed6, LOW);

 delay; 2000;

}

void backwards()

{

// turns on/off opposites in anticlockwise order

 digitalWrite(kPinLed5, HIGH);

 digitalWrite(kPinLed10, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed5, LOW);

 digitalWrite(kPinLed10, LOW);

 delay(delayTime);

 digitalWrite(kPinLed9, HIGH);

 digitalWrite(kPinLed4, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed9, LOW);

 digitalWrite(kPinLed4, LOW);

 delay(delayTime);

 digitalWrite(kPinLed8, HIGH);

 digitalWrite(kPinLed3, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed8, LOW);

 digitalWrite(kPinLed3, LOW);

 delay(delayTime);

 digitalWrite(kPinLed7, HIGH);

 digitalWrite(kPinLed2, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed7, LOW);

 digitalWrite(kPinLed2, LOW);

 delay(delayTime);

 digitalWrite(kPinLed6, HIGH);

 digitalWrite(kPinLed1, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed6, LOW);

 digitalWrite(kPinLed1, LOW);

 delay(delayTime);

 digitalWrite(kPinLed5, HIGH);

 digitalWrite(kPinLed10, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed5, LOW);

 digitalWrite(kPinLed10, LOW);

 delay; 2000;

void right()

{

 // turn on each of the LEDs in clockwise order

 //let b3=0;

 //do;

 digitalWrite(kPinLed1, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed2, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed3, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed4, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed5, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed6, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed7, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed8, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed9, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed10, HIGH);

 delay(delayTime);

 // turn off each of the LEDs in clockwise order

 digitalWrite(kPinLed1, LOW);

 delay(delayTime);

 digitalWrite(kPinLed2, LOW);

 delay(delayTime);

 digitalWrite(kPinLed3, LOW);

 delay(delayTime);

 digitalWrite(kPinLed4, LOW);

 delay(delayTime);

 digitalWrite(kPinLed5, LOW);

 delay(delayTime);

 digitalWrite(kPinLed6, LOW);

 delay(delayTime);

 digitalWrite(kPinLed7, LOW);

 delay(delayTime);

 digitalWrite(kPinLed8, LOW);

 delay(delayTime);

 digitalWrite(kPinLed9, LOW);

 delay(delayTime);

 digitalWrite(kPinLed10, LOW);

 delay;2000;

}

void left()

{

// turn on each of the LEDs in anticlockwise order

 digitalWrite(kPinLed10, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed9, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed8, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed7, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed6, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed5, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed4, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed3, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed2, HIGH);

 delay(delayTime);

 digitalWrite(kPinLed1, HIGH);

 delay(delayTime);

 // turn off each of the LEDs in anticlockwise order

 digitalWrite(kPinLed10, LOW);

 delay(delayTime);

 digitalWrite(kPinLed9, LOW);

 delay(delayTime);

 digitalWrite(kPinLed8, LOW);

 delay(delayTime);

 digitalWrite(kPinLed7, LOW);

 delay(delayTime);

 digitalWrite(kPinLed6, LOW);

 delay(delayTime);

 digitalWrite(kPinLed5, LOW);

 delay(delayTime);

 digitalWrite(kPinLed4, LOW);

 delay(delayTime);

 digitalWrite(kPinLed3, LOW);

 delay(delayTime);

 digitalWrite(kPinLed2, LOW);

 delay(delayTime);

 digitalWrite(kPinLed1, LOW);

 delay; 2000;

}

void halt()

{

 digitalWrite(kPinLed1, LOW);

 digitalWrite(kPinLed2, LOW);

 digitalWrite(kPinLed3, LOW);

 digitalWrite(kPinLed4, LOW);

 digitalWrite(kPinLed5, LOW);

 digitalWrite(kPinLed6, LOW);

 digitalWrite(kPinLed7, LOW);

 digitalWrite(kPinLed8, LOW);

 digitalWrite(kPinLed9, LOW);

 digitalWrite(kPinLed10, LOW);

}