#include <Servo.h> // The Servo library allows Arduino to control servo motors

Servo myservoA;

Servo myservoB;

Servo myservoC;

Servo myservoD;

Servo myservoE;

Servo myservoF;

// Define and initialize variables

int i,pos,myspeed;

int sea,seb,sec,sed,see,sef;

void setup()

{

myservoA.attach(3); // Waist Joint (A): Port 3

myservoB.attach(5); // Upper Arm Joint (B): Port 5

myservoC.attach(6); // Forearm Joint (C): Port 6

myservoD.attach(9); // Rotation of Forearm Joint (D): Port 9

myservoE.attach(10); // Wrist Joint (E): Port 10

myservoF.attach(11); // Rotation of Wrist Joint (F): Port 11

// Control joints

myservoA.write(66);

myservoB.write(90);

myservoC.write(50);

myservoD.write(90);

myservoE.write(120);

myservoF.write(90);

}

void loop()

{

sea=myservoA.read();

seb=myservoB.read();

sec=myservoC.read();

sed=myservoD.read();

see=myservoE.read();

sef=myservoF.read();

myspeed=1000; // higher value <---> slower

for(pos=0;pos<=myspeed;pos+=1)

{

myservoA.write(int(map(pos,1,myspeed,sea,66)));

myservoB.write(int(map(pos,1,myspeed,seb,90)));

myservoC.write(int(map(pos,1,myspeed,sec,40)));

myservoD.write(int(map(pos,1,myspeed,sed,90)));

myservoE.write(int(map(pos,1,myspeed,see,120)));

myservoF.write(int(map(pos,1,myspeed,sef,90)));

delay(1);

}

delay(2000); // delay 2s

// Read current servo positions

sea=myservoA.read();

seb=myservoB.read();

sec=myservoC.read();

sed=myservoD.read();

see=myservoE.read();

sef=myservoF.read();

for(pos=0;pos<=myspeed;pos+=1)

{

myservoC.write(int(map(pos,1,myspeed,sec,80)));

delay(1);

}

delay(2000);

sea=myservoA.read();

seb=myservoB.read();

sec=myservoC.read();

sed=myservoD.read();

see=myservoE.read();

sef=myservoF.read();

for(pos=0;pos<=myspeed;pos+=1)

{

myservoA.write(int(map(pos,1,myspeed,sea,120)));

delay(1);

}

delay(2000);

for(pos=0;pos<=myspeed;pos+=1)

{

myservoC.write(int(map(pos,1,myspeed,80,40)));

delay(1);

}

delay(2000);

for(pos=0;pos<=myspeed;pos+=1)

{

myservoC.write(int(map(pos,1,myspeed,40,80)));

delay(1);

}

delay(2000);

sea=myservoA.read();

seb=myservoB.read();

sec=myservoC.read();

sed=myservoD.read();

see=myservoE.read();

sef=myservoF.read();

for(pos=0;pos<=myspeed;pos+=1)

{

myservoA.write(int(map(pos,1,myspeed,120,66)));

delay(1);

}

delay(2000);

for(pos=0;pos<=myspeed;pos+=1)

{

myservoC.write(int(map(pos,1,myspeed,80,40)));

delay(1);

}

delay(2000);

for(pos=0;pos<=myspeed;pos+=1)

{

myservoC.write(int(map(pos,1,myspeed,40,80)));

delay(1);

}

delay(2000);

sea=myservoA.read();

seb=myservoB.read();

sec=myservoC.read();

sed=myservoD.read();

see=myservoE.read();

sef=myservoF.read();

for(pos=0;pos<=myspeed;pos+=1)

{

myservoA.write(int(map(pos,1,myspeed,66,50)));

delay(1);

}

delay(2000);

}