SOFTWARE CODE

SOFTWARE USED:ENERGIA

SOFTWARE CODE:

```
#define p1 5
#define p2 6
#define p3 7
#define p4 8
#define p5 9

void setup()
{
 // put your setup code here, to run once:
 pinMode(p1, OUTPUT);  //vertical motor ON/OFF
 pinMode(p2, OUTPUT);  //vertical motor Direction Control
 pinMode(p3, OUTPUT);  //horizontal motor ON/OFF.

 pinMode(p4, OUTPUT);  //brush motor ON/OFF
 pinMode(p5, OUTPUT);  //brush motor Direction Control

}

void loop()
{
 // put your main code here, to run repeatedly:
 int n,rpm2=1,rpm1=1;                    //rpm1, rpm2 are rpms of vertical & horizontal motor
respectively.
                         //n represents the no. of side shifts.
 float t1, t2;                           // t1, t2 are times for vertical & horizontal
motion respectively.
 float d=(0.31847), bf=0.25 ,h=0.75, b=0.75;   //d=diameter of the vertical motor gear wheel.
                         //h=height. b=breadth. bf=breadth of the cleaning
platform.
 float dpr1, dpr2;               // dpr represents the distance per revolution.

 n=(b/bf);

 while(n>0)
  {
  dpr1=(3.14*(d));
  t1=(h/(rpm1*dpr))*60;          //t1 secs is the time taken to safely cover vertical
distance.

   digitalWrite(p3, LOW);         //NC of relay gets actuated. Water valve ON. Horizontal
motor OFF.
   digitalWrite(p4, HIGH);        //brush motor gets switched ON.
   digitalWrite(p5, LOW);         //NC of relay gets actuated. Direction of brush motor
rotation=CW
```

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    digitalWrite(p1, HIGH);              //Vertical motor gets switched ON.
    digitalWrite(p2, HIGH);              //NO of relay gets actuated. Direction of rotation=CCW.
Platform moves downwards
    delay(t1*1000);                       //The platform moves down for t1 secs

    digitalWrite(p5, HIGH);              //NO of relay gets actuated. Direction of brush motor
rotation=CCW.

    digitalWrite(p2, LOW);               //NC of relay gets actuated.  Direction of rotation=CW.
Platform moves upwards.
    delay(t1*1000);                       //The platform moves up for t1 secs

    digitalWrite(p1, LOW);               //Switching OFF both vertical and brush motor.
    digitalWrite(p4, LOW);

    delay(2000);                          //WAIT for 2 secs

    dpr2=(3.14*(d));
    t2=(bf/(rpm2*dpr2))*60;              //t2 secs is the time taken to move sidewards for 1 shift.

    digitalWrite(p3, HIGH);              //NO of relay gets actuated. Horizontal motor supply ON.
Water valve OFF.
    delay(t2*1000);                       //Platform moves sideways upto t2 secs.

    digitalWrite(p3, LOW);               //NC of relay gets actuated. Horizontal motor supply
OFF. Water valve ON.

    n=n-1;
    delay(3000);                          //WAIT for 3 secs.
  }
 delay(60000);                            //WAIT for 1 minute at end of cleaning operation.
}
```