ARDINO CODE:

```
const int trigger1 = 2; //Trigger pin of 1st Sesnor
const int echo1 = 3; //Echo pin of 1st Sesnor
const int trigger2 = 4; //Trigger pin of 2nd Sesnor
const int echo2 = 5;//Echo pin of 2nd Sesnor

long time_taken;
int dist,distL,distR;

void setup() {
Serial.begin(9600);

pinMode(trigger1, OUTPUT);
pinMode(echo1, INPUT);
pinMode(trigger2, OUTPUT);
pinMode(echo2, INPUT);
}

/*###Function to calculate distance###*/
void calculate_distance(int trigger, int echo)
{
digitalWrite(trigger, LOW);
delayMicroseconds(2);
digitalWrite(trigger, HIGH);
```

```
delayMicroseconds(10);
digitalWrite(trigger, LOW);

time_taken = pulseIn(echo, HIGH);
dist= time_taken*0.034/2;
if (dist>50)
dist = 50;
}

void loop() { //infinite loopy
calculate_distance(trigger1,echo1);
distL =dist; //get distance of left sensor

calculate_distance(trigger2,echo2);
distR =dist; //get distance of right sensor

//Uncomment for debudding
/*Serial.print("L=");
Serial.println(distL);
Serial.print("R=");
Serial.println(distR);
*/
//Pause Modes -Hold
if ((distL >40 && distR>40) && (distL <50 && distR<50)) //Detect both hands
{Serial.println("Play/Pause"); delay (500);}
```

```
calculate_distance(trigger1,echo1);
distL =dist;

calculate_distance(trigger2,echo2);
distR =dist;

//Control Modes
//Lock Left - Control Mode
if (distL>=13 && distL<=17)
{
 delay(100); //Hand Hold Time
 calculate_distance(trigger1,echo1);
 distL =dist;
 if (distL>=13 && distL<=17)
 {
  Serial.println("Left Locked");
  while(distL<=40)
  {
   calculate_distance(trigger1,echo1);
   distL =dist;
   if (distL<10) //Hand pushed in
   {Serial.println ("Vup"); delay (300);}
   if (distL>20) //Hand pulled out
   {Serial.println ("Vdown"); delay (300);}
```

```
    }
  }
}
//Lock Right - Control Mode
if (distR>=13 && distR<=17)
{
  delay(100); //Hand Hold Time
  calculate_distance(trigger2,echo2);
  distR =dist;
  if (distR>=13 && distR<=17)
  {
    Serial.println("Right Locked");
    while(distR<=40)
    {
      calculate_distance(trigger2,echo2);
      distR =dist;
      if (distR<10) //Right hand pushed in
      {Serial.println ("Rewind"); delay (300);}
      if (distR>20) //Right hand pulled out
      {Serial.println ("Forward"); delay (300);}
  }
}
}
delay(200);
}
```

PYTHON CODE:

```
import serial #Serial imported for Serial communication
import time #Required to use delay functions
import pyautogui

ArduinoSerial = serial.Serial('COM5',9600) #Create Serial port object called arduinoSerialData
time.sleep(2) #wait for 2 seconds for the communication to get established

while 1:
    incoming = str (ArduinoSerial.readline()) #read the serial data and print it as line
    print (incoming)

    if 'Play/Pause' in incoming:
        pyautogui.press('space')

    if 'Rewind' in incoming:
        pyautogui.press('left')
        #hotkey('ctrl', 'left')

    if 'Forward' in incoming:
        pyautogui.press('right')
        #hotkey('ctrl', 'right')

    if 'Vup' in incoming:
```

```
    pyautogui.press('down')
    #hotkey('ctrl', 'down')


if 'Vdown' in incoming:
    pyautogui.press('up')
    #hotkey('ctrl', 'up')

incoming = ""
```