

# **ABSTRACT**

**Team name - Pandemonium**

Use of any application makes it mandatory for us to use a screen, irrespective of the fact whether it lies in our comfort zone or not. Through this project, we aim to eliminate the necessity of being in proximity to the screen to give in an input.

## **IMPLEMENTATION**

To achieve our aim, we plan to make a device ( more of a pen) with which one can write on any random flat smooth surface which lies in the bluetooth connectivity range of the laptop. Everything one writes on the surface gets displayed on the laptop screen. So basically one is not forced to go to the screen to write something on it. We aim to achieve the above said by using motion sensing techniques which will involve the use of gyroscope and accelerometer.

## **WORKING**

We plan to use an Inertial Measurement Unit which will function as motion detecting device. It makes use of 3 axes gyroscopes and accelerometers. The motion at the point of attachment of IMU will give us the corresponding motion of the pen nib, using appropriate physical formulae, and hence we get the information about what is being written using the device. Coding will be done using arduino. This information will be supplied to the laptop via a bluetooth module which we will program to obtain the desired output.

## **COMPONENTS**

1. IMU with 6/9 degrees of freedom
2. Piezoelectric pressure sensor
3. Arduino Kit
4. Bluetooth Module
5. Miscellaneous mechanical components.

## **APPROXIMATE COST**

- 1 IMU - Rs 1000
- Arduino and components - Rs 1000
- Piezoelectric pressure sensor - Rs 400
- Bluetooth Module - Rs 400
- Miscellaneous Components - Rs 1000

Total approximate cost - Rs 4000

## **PLAN OF ACTION**

### **Week 1 :**

1. To do research on the project.
2. To select and buy the components required.

### **Week 2 :**

1. To learn coding.
2. To implement coding.

### **Week 3 :**

1. To start programming various components.
2. To start assembly of various parts.

### **Week 4 :**

1. To complete the mechanical assembly.
2. To check the working.

### **Week 5 :**

1. For debugging and finishing the project.

## TEAM MEMBERS

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