

## **TITLE:**

***Self Playing Guitar Bot***

## **Team Name:**

***The Evil Masterminds***

## **AIM:**

The main aim is to make a bot which can play any songs input by the user in the form of notes. It doesn't take any time to learn the song like a human guitarist. This means any common man can use it to play a guitar which in turn has a lot of benefits such as it strums away the stress and boosts our brain power making it a better alternative from just listening songs. It also has the advantage of playing the songs for a long time which isn't possible otherwise.

## **TEAMMATES:**

Parth Shah : 15D070004

Rohan Pathak : 15D070006

Abhinav Gupta : 150100112

Harshit Moondra : 150070007

## **PLAN:**

We will create a bot which can play guitar by taking input in the form of notes by reading it from a piece of paper with the help of image processing as well as we will try to create an app through which we can command the bot to play the tune. First we need to create a layout for the job and then distribute the work among the team members.

## **PLAN OF ACTION:**

**Week 1:** Learning how the guitar functions plus making the circuit for different buttons and stuff (We'll use Arduino board) .

**Week 2:** coding on arduino and the mechanical work of creating the bot.

**Week 3:** First we will create a part of the mechanical bot so that it will play with only one string as per the instructions. App and everything else can come later.

**Week 4:** Continue with the rest of the part of the bot left and then try creating an app on the mobile so the bot can be made to function through it.

**Week 5:** Carry out various tests and then correct the mistakes and try out various modifications.

**Week 6:** Give the final touch to the bot.

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### **SKILLS NEEDED TO BE LEARNT:**

1. Image Processing / RPI on Arduino
2. Solidworks in order to design the mechanical part of the bot.
3. Coding at a complex level as to create an app and make the bot to function as per the instructions provided by the user.
4. Mechanical workshop skills.
5. Wiring and circuit connections and then fault finding.

### **Components Required:**

1. Electrical Components(R,L,C,wires etc.).
2. Guitar.

Other components will be added later.

### **COST ESTIMATED:**

Around 10000.

<https://www.youtube.com/watch?v=-abGDv-GMGk>