Project Title
VIRTUAL PIANO

Implementation steps

1st week:

1. Start scavenging for resources: info, circuit diagrams, researches, markets etc.
2. Get equipped with the required tools: research, components, software.
3. Learn what is required: image processing with processing software.

    This includes basic data gathering, research work and searching for the required hardware and software resources

2nd & 3rd week:

1. Be ready with the final design (get it approved from mentors)
2. Start fabrication and the coding and image processing part.
3. Linking the input read with the respective sound.

    This includes getting the circuit designs and all the hardware components for the fabrication so that work can be started towards the building up of the project, making the structure, and the software part which includes coding for the webcam, getting the input, interacting with the OS, output sound.

4th week:

1. Getting all the parts together, compiling the hardware
2. Check the working, the compatibility with the output
3. Testing and debugging

    This is basically catching up with the fabrication of the hardware components, bringing them all together, compiling them all, and checking the input received by sensors (webcam), compatibility with the OS.

5th week:

1. Final touch to project.
2. Submission.
3. Packing our bags and leaving home.

    This is basically towards the end when the separate testing is completed and the components are all put together. Checking for any bugs in the code, driver and all, testing it all together and

debugging. When ready, putting in some final touches to the covers and the code for technical soundness and aesthetic appeal.

Components Required

1. Webcam (Rs.1000)
2. Lasers * 20 (Rs.1500)
3. Stand(Rs.100)
4. USB cable extension (Rs.100)
5. Battery(Rs.300)
6. Other expenses(Rs.1200)

What we will learn from this project

1. Image Processing
2. Sound Processing
3. How to design a project