Mahatma Education Society's

Pillai College of Engineering

Department of Electronics and Telecommunication Engineering

TE EXTC

Even Semester (2020-21)

PBL TOPIC:Voice Controlled Home Automation System

Project-based learning (PBL) is a powerful teaching method that has extensive benefits for students, ranging from critical thinking to project management to self-confidence. Project-Based Learning is usually a collaborative process, which allows students to practice their communication skills and to learn to work together.

This new generation is really exposed to advanced gadgets and technologies. With the help of PBL students are utilizing subject knowledge to implement and design the problem statement given by the department. Every semester the Department suggests realistic problems and expects very simple solutions using easily available materials and components from the student.

For January – June 2021, the PBL problem statement for Third Year Electronics and Telecommunication Engineering students was to develop **Voice Controlled Home Automation System** which requires knowledge of subjects which they learned in their curriculum and some knowledge of software skills.

Home automation and security is to help handicapped and old aged people who will enable them to control home appliances and alert them in critical situations.
(a)Voice recognition system, and (b) Wireless system.

This system is used to control home appliances uses a voice controlled android application.This system also help handicapped and old aged people which will enable them to control home appliances and alert them in critical situations.

Development of Home Automation system using Arduino, Bluetooth Module HC-05 using Android application and Google Assistant.

We have created problem statements with different features.

Essential Points to do in PBL:

Light, Fan , AC, Curtons

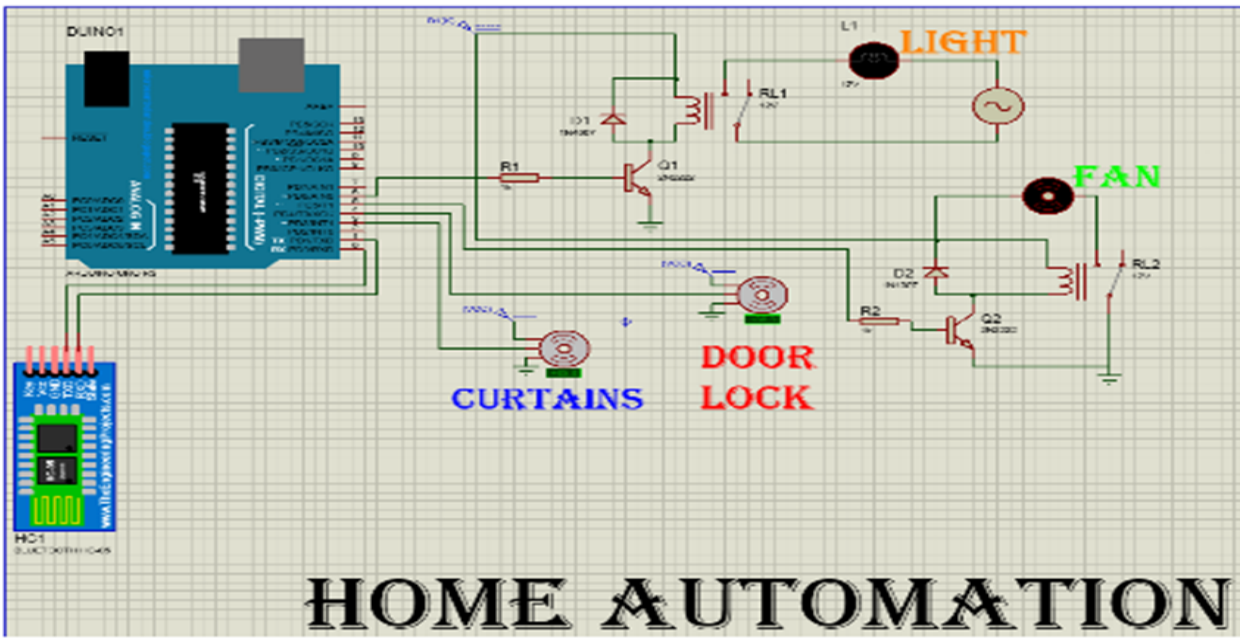
Along with it students had prepared one special topic for eg. Air Purifier, TV, Door Lock, chimney, Fridge, Wi Fi, Washing Machine, Smart Watering System etc.

14 student groups were working on different problems of development of Voice Controlled Home Automation System. Each group consists of 3 to 4 students.

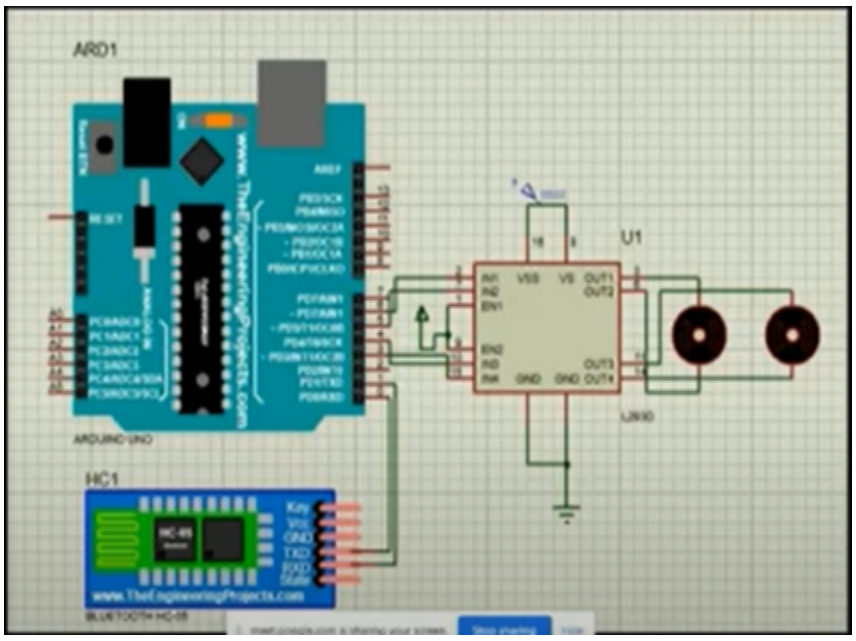
To identify progress of the project we conduct 1st stage PBL evaluation on 23rd April 2021. Many students have implemented the prototype and demonstrated their ideas in front of the internal examiners and the final PBL exhibition was conducted on **17th May 2021.**

Some Project Screenshots:

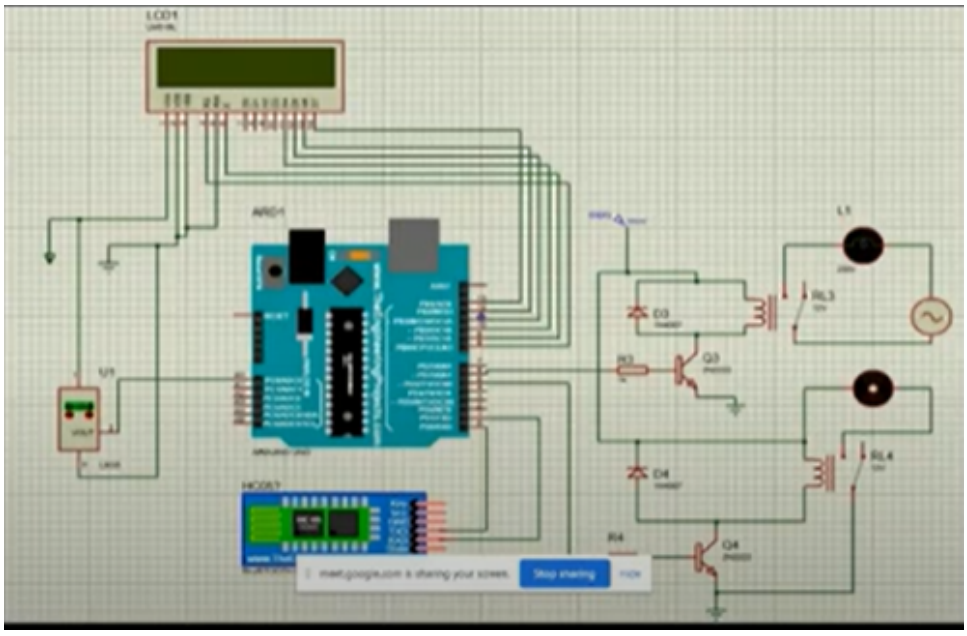
1.Home Automation System



2. Operation of Curtains:



3. Operation of AC:



Students Developed voice controlled home automation system using arduino and bluetooth module using android application and google assistant. This project helped them to get the knowledge on software simulation of home automation systems. They developed various applications like control of fan,AC, light, door lock on proteus software through voice commands on mobile application.Use of automation in houses will increase the quality of life.

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TE Electronics

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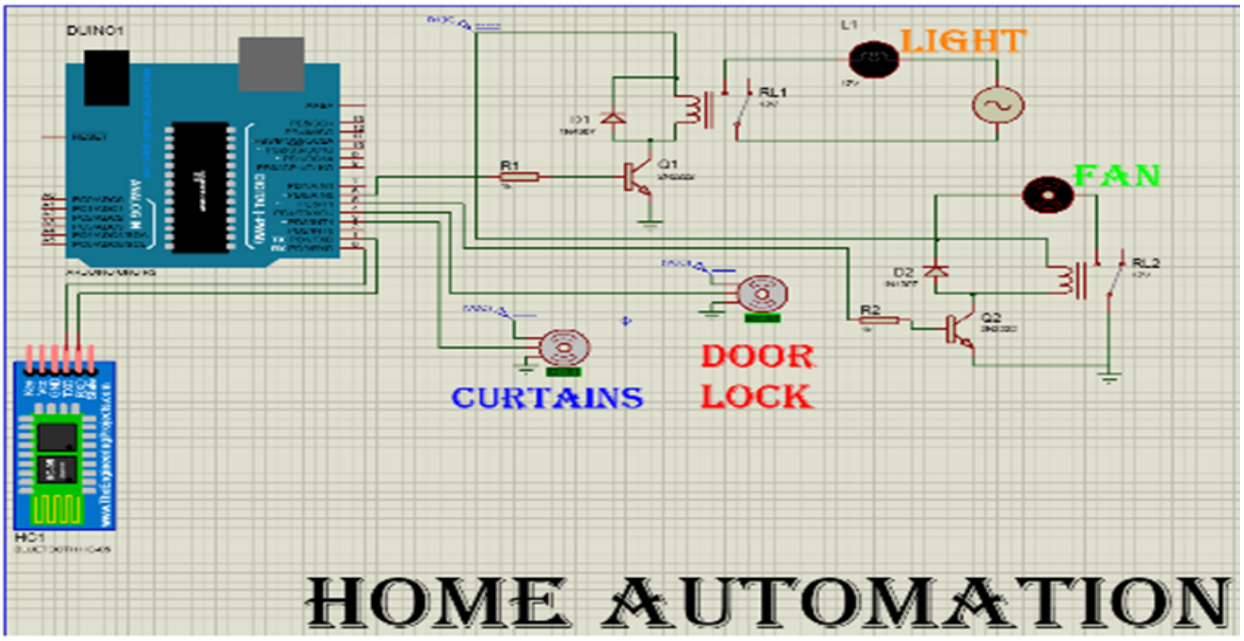

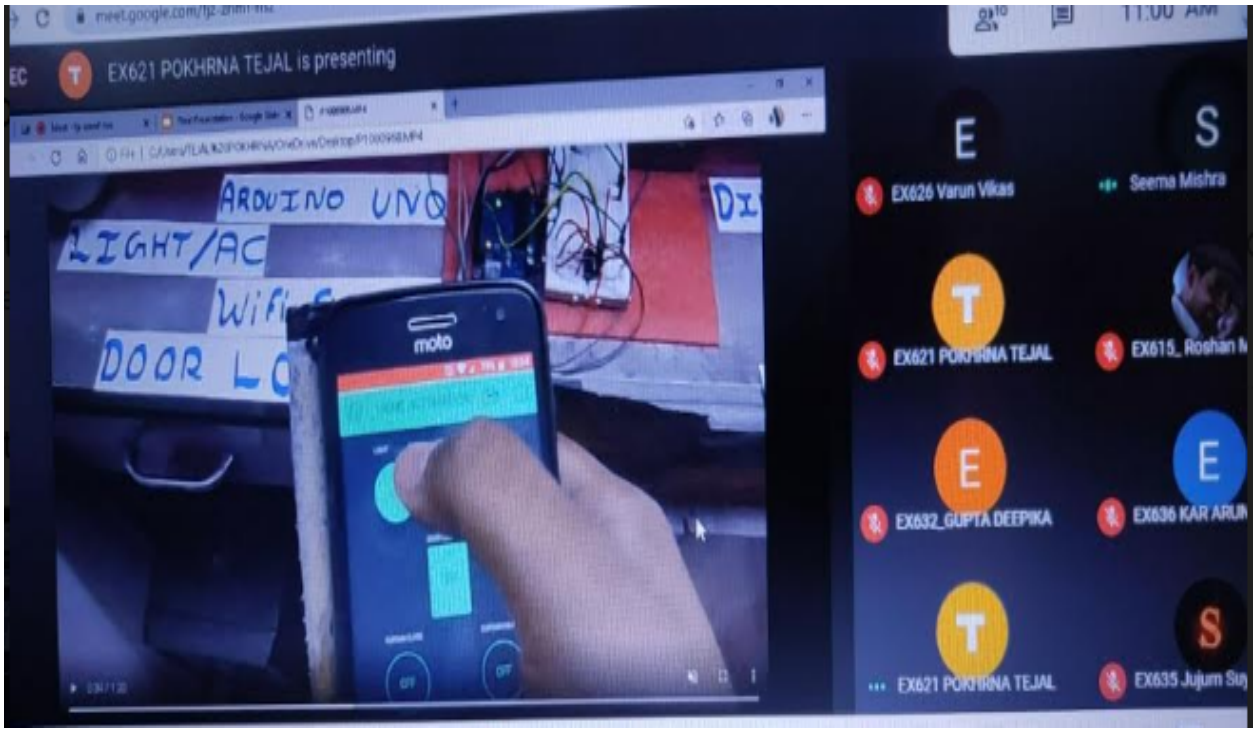

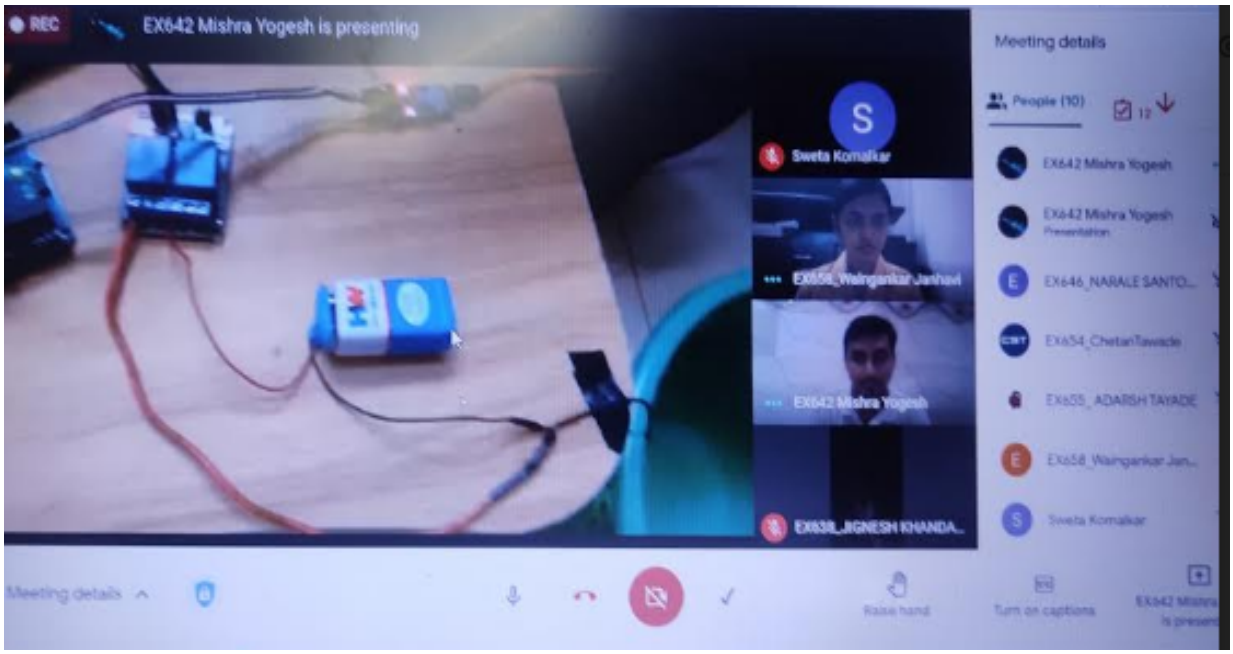
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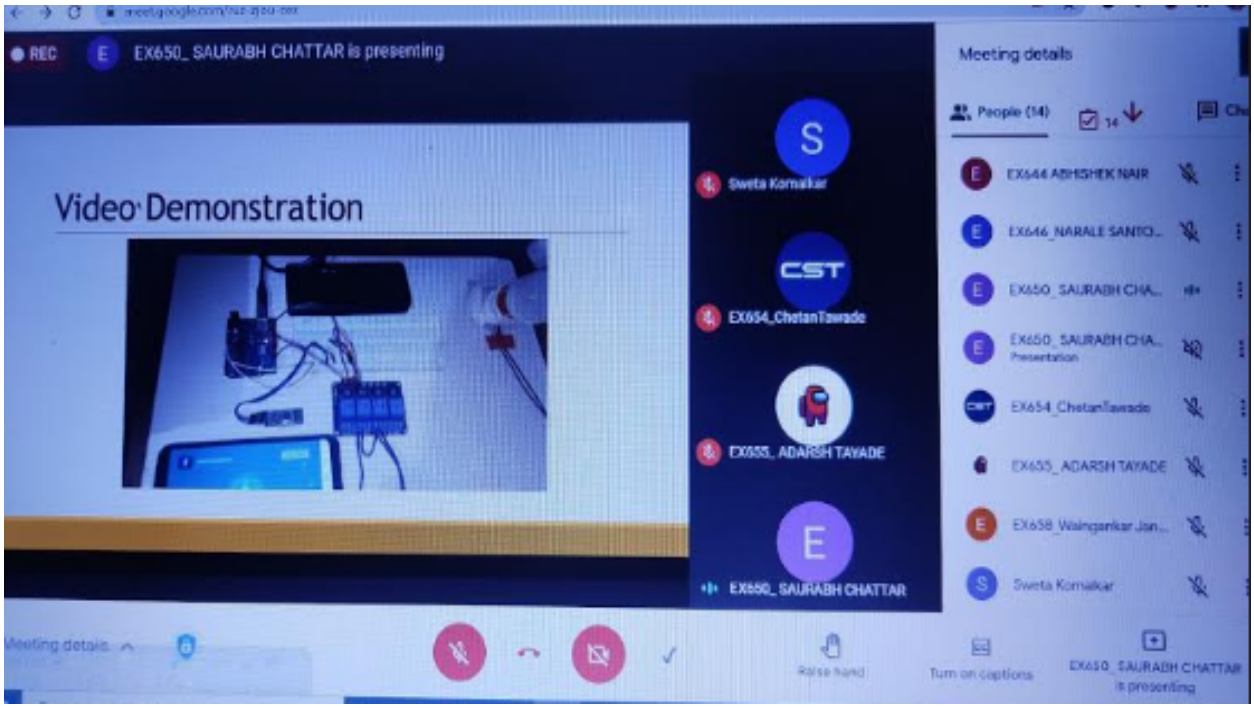
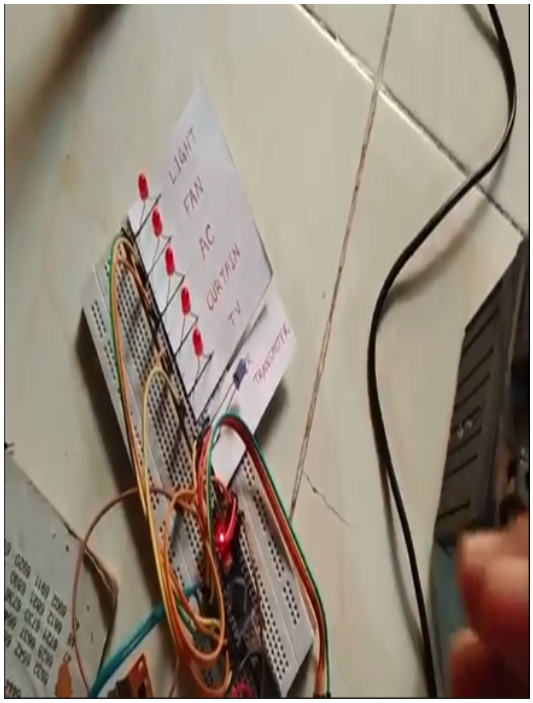
EX642 Mishra Yogesh is presenting
Sweta Komalkar
EX658_Waingankar Janhavi
EX642 Mishra Yogesh
EX638_JIGNESH KHANDA...
Meeting details
People (10)
EX642 Mishra Yogesh
EX642 Mishra Yogesh
Presentation
EX646_NARALE SANTO...
EX654_ChetanTawade
EX655_ADARSH TAYADE
EX658_Waingankar Jan...
Sweta Komalkar
Meeting details
Raise hand
Turn on captions


REC
EX650_ SAURABH CHATTAR is presenting
Video Demonstration
Sweta Komalkar
EX654_ChetanTawade
EX655_ ADARSH TAYADE
EX650_ SAURABH CHATTAR
Meeting details
People (14)
EX644 ABHISHEK NAIR
EX646_NARALE SANTO...
EX650_SAURABH CHA...
EX650_SAURABH CHA...
Presentation
EX654_ChetanTawade
EX655_ADARSH TAYADE
EX658_Waingankar Jan...
Sweta Komalkar
Meeting details
Raise hand
Turn on captions
EX650_SAURABH CHATTAR is presenting

2. Operation of Fan:

3. Operation of Television:

4. Operation of Curtain:



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