ENGINEERING CLINICS ECS - 1002

GUIDE: PROF. MOHAN BANSAL

TEAM MEMBERS:

21BCE8114 KRISHNA
21BCE7321 PRIYANSHU SAHU
21BCE8020 AYUSH YADAV
21BCE7420 ANKIT SINGH HADA
21BCE7582 ANKIT SINHA
21BCE8687 K. ROSHINI

"VOICE CONTROL BASED IOT HOME AUTOMATION SYSTEM USING GOOGLE ASSISTANT AND RASPBERRY PI"

IoT home automation is the ability to control domestic appliances by electronically controlled, internet-connected systems. It may include setting complex heating and lighting systems in advance and setting alarms and home security controls, all connected by a central hub and remote-controlled by a mobile app.

REQUIRED COMPONENTS:

- Raspberry Pi 3B
- LED Lights
- Motor

- Micro SD card
- Micro USB cable
- Relay module 4 channel

- Jumper wire
- Power supply
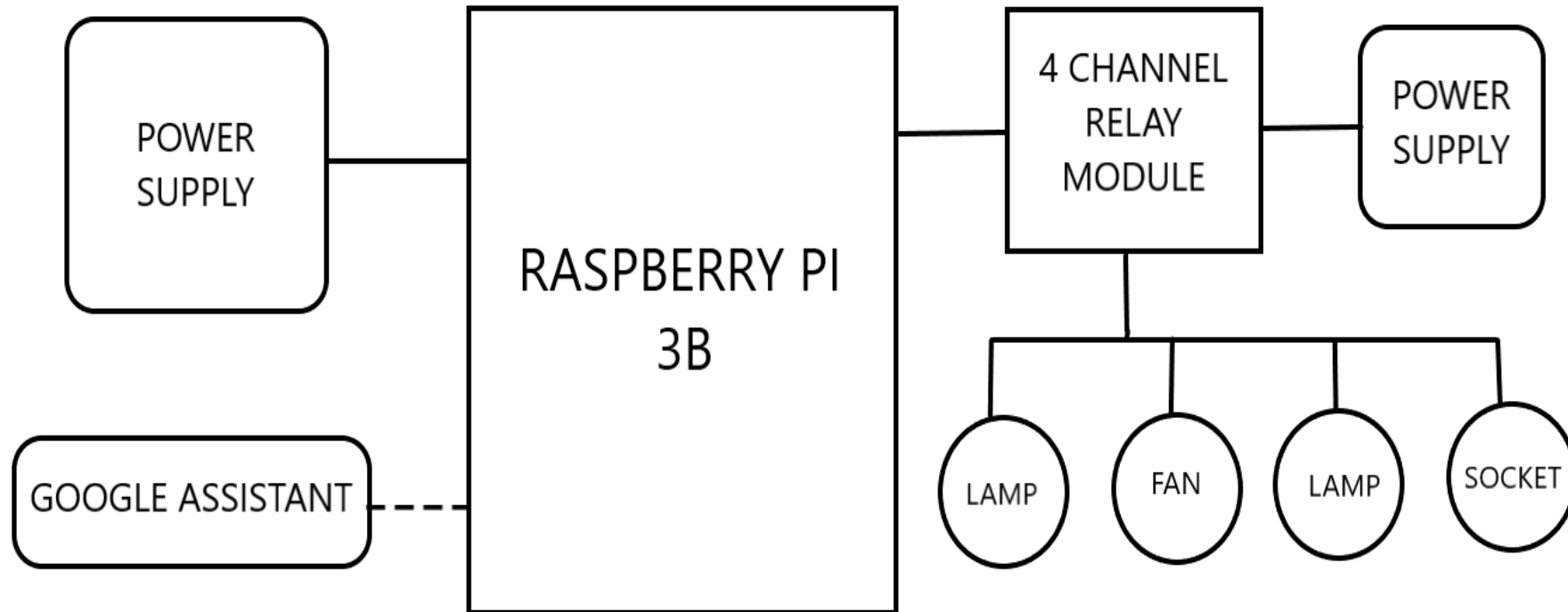- Socket
- Programming lang.: Python

Estimated Budget:

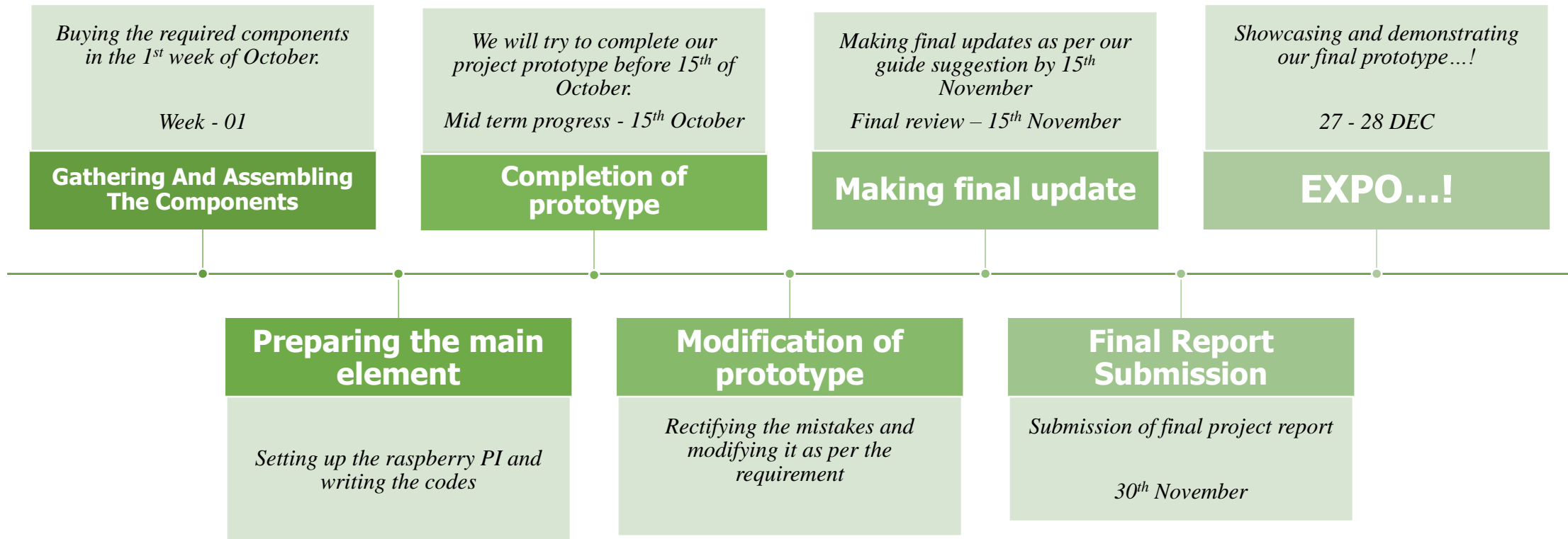| COMPONENT	COST
RASPBERRY PI	5900
MOTOR	70
MICRO SD CARD	300
MICRO USB CABLE	100
RELAY MODULE	100
SOCKET	100
TOTAL COST	6570 Rs

Plan

This Project is a Voice Control IoT Home Automation System using Google Assistant and is interfaced by the Raspberry Pi controller at its input. A 4 Channel Relay Module is connected to the Raspberry Pi and the Relay module perform various Operations. The Google Assistant Voice Commands transmits WI-FI signals containing information about which appliances need to be turned on. This signal is transmitted by the Wi-Fi signals sent to the Raspberry Pi controller. The Raspberry Pi processes this data and alerts the Relay Module about the process. The Relay Module can operate appliances such as LED light, Socket, Fan.

Block Diagram

TIMELINE

Buying the required components in the 1ˢᵗ week of October.

Week - 01

Gathering And Assembling The Components

We will try to complete our project prototype before 15ᵗʰ of October.

Mid term progress - 15ᵗʰ October

Completion of prototype

Making final updates as per our guide suggestion by 15ᵗʰ November

Final review – 15ᵗʰ November

Making final update

Showcasing and demonstrating our final prototype...!

27 - 28 DEC

EXPO...!

Preparing the main element

Setting up the raspberry PI and writing the codes

Modification of prototype

Rectifying the mistakes and modifying it as per the requirement

Final Report Submission

Submission of final project report

30ᵗʰ November

Thank you