# Main body (Design, Operation, Analysis, Reflection)

A house with many electrical wires

AI-generated content may be incorrect.

Figure 2 Main Body Design

A diagram of a network

Description automatically generated

Figure 3 Main Body Design 2

**Tools that used to automate Tharusha’s house :-**

1. Server
2. Access Pointer
3. Router
4. Smart Phone
5. IOT Device: Webcam, Street Lamp, Fan, Light, Coffee-Maker, Sensor, etc.
6. Motion Detector
7. Switch
8. Lawn Sprinkler
9. Water Drain
10. Wind Detector
11. Smart Car
12. Air Conditioner
13. LED Light
14. MCU board
15. Heating and cooling elements

Implementation Details **:**

The implementation Part was simple and efficient also it is very easy to handle Not only that when implementing in the real time it is very Cost effective. Since we are using One Server And one switch and one home gateway. For the Home automation. Also Because of the simple design Anyone can understand the Concepts of this automation System. Also Tharusha Can access to his home through Internet anywhere in the world.

# Logics / conditions in the server for making automated house –

Logics / Conditions:

1. When a motion Detect on front Door the Door will open and Camera will Turn On. And Light will turn on If there is no motion the camera and door will be closed. And the Light will be on Dim.
2. When There is a wind and Wind Detector Turned on All the Windows of the House will be Closed.
3. When there is a motion detection at the garage motion the web cam will turn on and the garage door will be open. Otherwise, the door and web cam will be turned off.
4. When Living Room Motion Detector On Living Room Door Lock will Unlock and Web Cam will turn On and Light Living Room will turn On. Other wise Door will lock and the Light in Living room will be on dim.
5. When the AC is turned ON Automatically the Fan and window on the living Room will be closed.
6. When the AC is turned off Fan and window will turn on.
7. When Bathroom Motion Detector On the Bathroom door and the light will turn on Also the Shower will turn on.
8. When there is no Motion on the motion detector on bathroom the door will lock light will turn off and shower will turn off.
9. When the shower turned on the water drain will turn on.
10. When a motion detector on the bedroom the bed room door will unlock and the AC in bedroom turned on and the light will turn on.
11. When the AC in turned on in the bedroom the window will be closed
12. When motion detector turned off in bedroom the window will be open. And the light will be on dim.
13. When Kitchen Motion Detector On the kitchen door will unlock and the light will be turned on. Also the fan will be turned on and the coffee machine will turn on. And the window will be open and the web cam will be turned on.
14. When there is no motion detected in the kitchen motion detector the light will off. Coffee machine will be off fan will be off. Window will be closed and the web cam will be off. And the door will be locked.