INTENSITY CONTROL OF HOME APPLIANCES USING MQTT PROTOCOL

ROHAN N, AKHIL V, ROSHAN N, MRIDHULA S,
PROJECT GUIDE: DR. ANURADHA M

MOTIVATION

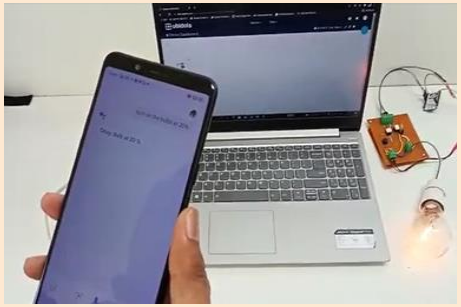
- Develop a wrist band to control devices.
- Make it self-regulating for Physically handicapped and old people.
- To make it relatively affordable, simple to implement and users friendly.

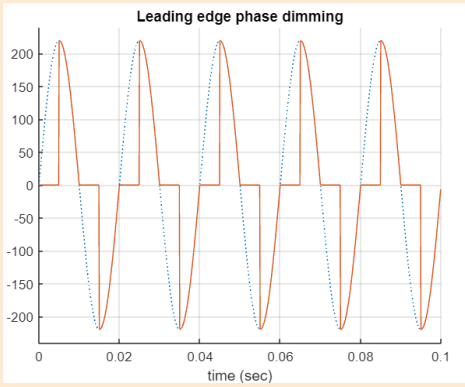
IMPLEMENTATION

- Various input methods such as voice using google assistant, slide bar using ubidots server and based on our gesture with the help of an accelerometer.
- Includes a smart band which helps in controlling the intensities of devices taking hand gestures as input.
- MQTT protocol is used as the communication protocol in this model.
- The values from the wristband and google assistant which are the publisher is sent to the MQTT broker.
- The MQTT broker then sends the value to the subscriber.

THEORY

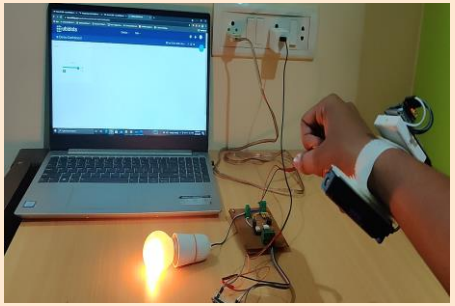
- Leading edge phase dimming method and MQTT protocol was used to complete the project.
- The MQTT protocol has 3 entities: broker, publisher and the subscriber and we are able to control the intensity of home appliances using this method.





ANALYSIS

- The subscriber circuit is divided into two parts Zero crossing detecting circuit and phase/angle control using triac.
- The output of the circuit shows that there is power as the power is provided only for certain amount of time.



RESULT AND CONCLUSION

- Proposes an innovative way to control Home Appliance.
- The advantage of the proposed method is scalability and it's a low-cost solution.
- As a result of this approach, there is power saving.
- Future Scope, apply this into smartwatch and failsafe system.