Experiment : 12

Aim Develope a Real time application like smart home with following requirement when user enters into house the required appliances like fan, light should be switched on. Appliances should also get controlled remotely by a suitable web interface. The objective of this application is student should construct complete smart application in grp

Theory

① **Basics - Send emails using Python**

- The smtplib module of Python is basically all you need to send simple emails without any subject line or such additional info.
- But for real emails you do need a subject line and lots of info - maybe even pictures and attachment
- This is where Python's email package comes in. Keep in mind its not possible to send an email message using the email package alone.
- You need a combination of both email and smtplib.

② **How to send emails**

1 Set up the SMTP server and log into your account

2 Create the MME Multipart msg object and load it with appropriate headers for from to and subject fields
3 Add your message body
4 Send the msg using the SMTP server object

(3) The smtlib

1. The smtlib module defines an SMTP client session object that can be used to send mail to any Internet machine with an SMTP or ESMTP listener daemon.
2. SMTP ~~session~~ stands for Simple Mail Transfer Protocol. The smtplib modules is useful for communicating with mail server to send mail
3. Sending mail is done with Python's smtplib using an SMTP server.
4. Actual usage varies depending on complexity of the email and settings of the email server the instruction here are based on sending email through Gmail.

(4) Servo Motor

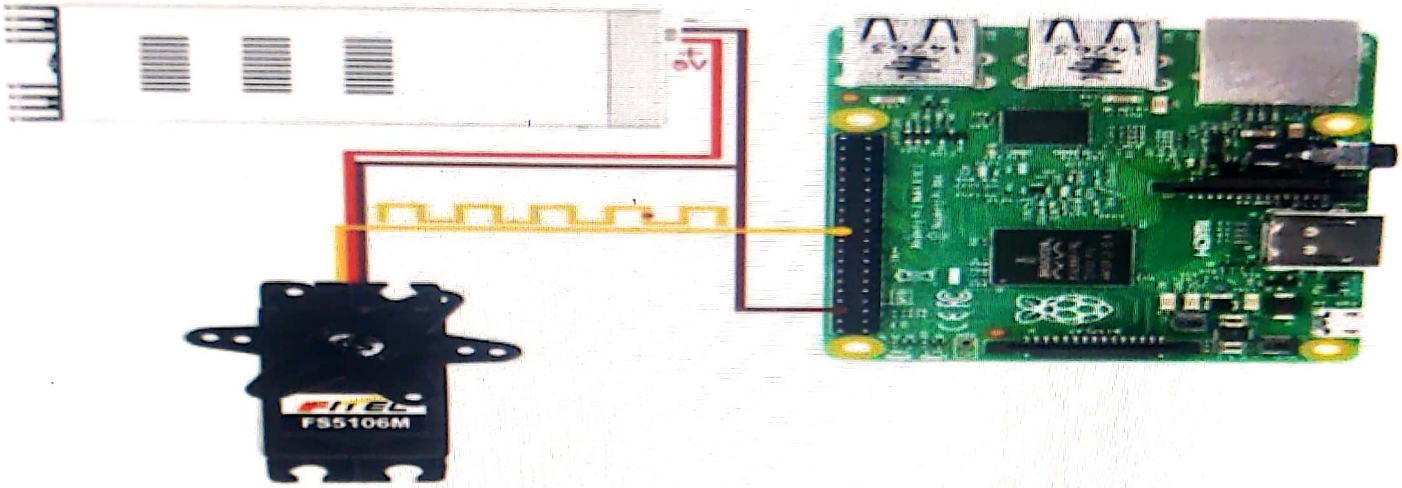
1. A servo Motor is a combination of DC motor, position control systems and gears. Servos have many applications in the modern world and with that they are available in diff shape and sizes. We will be using SG90 Servo Motor which is one of the popular and

cheapest one.

2 A Servo Motor mainly has three wires one is for +ve voltage another if is for ground and last one is for position setting. The Red wire is connected to power. Brown wire wire is connected to ground and orange wire connected to signal

3. A servo moter is a combination of DC motor position control and gears. Serves have many application in the modern world and with that they are available in different shape and sizes. We will be using SG90 Servo Moter which is one of the popular and cheapest one.

4. A Servo Motor mainly has three wires one is for +ve voltage and other ground and last for position setting. The red wire connected to power. Brown to ground and orange to signal.



Fig

(5) Steps

- Create the lock/ unlock application to control the servo motor lock change its owner and group as www-data. Location : /var/www/
- Write the application to read html. the image and send it as email attachment to the user location : /var/www/html

Conclusion

Thus we have developed smart Home System