

Experiment No - 11

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Aim :- Develop a Real time application like smart home with following requirement. When users enters into house the required appliances like fan, light should be switched on. Appliances should get controlled remotely by a suitable web interface. The objective of this application is student should construct complete smart application in group.

Theory

Basic - send emails using python.

1. the smtplib module of python is basically, all you need to send simple email, without any object line or such additional information.
2. But for real emails, you do need subject line and lots of information - maybe even pictures and attachments.
3. This is where python's email package comes in. Keep in mind that it's not possible to send an email message.

Using the email package alone.

How to send Emails?

1. Set up the SMTP server and log into your account.
2. Create the MIME multipart message object and load it with appropriate headers for from, to and subject fields.
3. Add your message body.
4. Send the message using SMTP server object.

The Smtplib.

1. The smtplib 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. The smtplib module is useful for communication with mail server to send mail.
3. Sending mail is done with python's smtplib using SMTP servers.
4. Actual usage varies depending on complexity of the email and setting of the email server, the instructions here are based on sending emails through gmail.

Servo motor :

1. A servo motor is a combination of DC motor, position control system and gears. servos have many applications in the modern world and with that, they are available in different shapes and sizes. we will be using Sago Servo motor which is popular, cheapest and it is 180° servo. we can position the axis from $0-180^\circ$.
2. Servo motor is a combination of DC motor position control system and gears.

Steps :

1. create the lock/unlock application to control the servo motor lock, change its owner and group a `sudo -data` location: `/var/www/html`.
2. write application using to read the images and send it as email attachment to the user Location: `/home/pi`

Conclusion \rightarrow Thus, we have developed short application for smart home system.