

# EXPERIMENT. No. 11

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Div - B Class TE

AIM = Develop a Realtime application like Smart Home with following requirement: When User enters into house the required appliances like fan light should be switch 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 :-

Basics - Send emails Using Python

1. The smtplib module of python is basically all you need to send simple emails without any object line or such additional information.
2. But for real, ~~emails~~ you do need a subject line and lots of information - may be 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 the SMTP client Session

The Smtplib:

1. The Smtplib module defines as SMTP client Session Objective 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 servers to send mail.
3. Sending mail is done with python's Smtplib using SMTP server.
4. Actual uses depending on complexity of the email and setting of the mail server the instructions here are based on sending email 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 S490 Servo motor which is popular, cheapest and it is 180° Servo. We can position the axis from 0° to 180° at will.
2. It has 3 wires: one is for positive voltage, another is for ground, and last one for position. Setting red wire is connected to power, Brown to



ground and orange to signal

3. Servo motor is a combination of DC motor position control system and gears

Steps.

- Create the lock unlock application to control the servo motor lock change its owner and group a screenshot data location (var/www/html) send it as email attachment to the user location: /home/pi
- Write the application to read the image and send it as email attachment to the user location /home/pi
- Write the application using HTML-PHP to control the servo motor lock.  
Location (var/www/html)

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