

# Automation for Ease of Life : To Schedule Bulk Messaging and Email System using Python

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## ABSTRACT

Now a days Automation is used in every field. Even though automation is used in our daily life like Air conditioner, Television, Fan and most of the electronic gadgets are remotely controlled and also voice controlled. Machine mimics the human task, and reduce time. Humans can make mistake in doing same task repeatedly but machines cannot. Automation improves efficiency of work. In this Paper we are proposed Automation in sending Mails and Text Messages using Python.

**Keywords:** Python, Gmail, Automation, WhatsApp, Message, Scheduling

## Article Info

### Publication Issue :

Volume 8, Issue 6

November-December-2022

**Page Number :** 300-304

### Article History

Accepted: 12 Nov 2022

Published: 02 Dec 2022

## I. INTRODUCTION

There are lots mailing platforms available and categorized in two ways: A. Web based Mail – eg., Gmail, Orkut, Yahoo generally it can be used on web browser and B. Outlook, Apple Mail are Client based Application. It is more secure than Web based Mail. Senders and Receiver may have same or different mailing platforms. There are also lots of application for transferring text message like Whatsapp, Telegram or also send messages directly to Phone number.

In this paper, we are presenting how automation is implemented for Sending bulk of Mails and Text messages at once. The technology behind Automation is free and open-source cross platform, it is done using Python. Python is High Level Programming Language. It makes drastic evolution in the era of Automation. The Advantage of automation in sending mails and

messages is to save our time. We can schedule when to send how many times it will send. Another advantage is that we can do both mail as well as message at same time. Sometimes company or any organization sends reminder via mail and message. Normally we have to done both tasks separately and spent double time.

## II. METHODS AND MATERIAL

**A. Automation:** It minimized human inputs that reduces human efforts in doing same task repeatedly, save our time, and improved efficiency. Humans can make mistake in doing same task repeatedly but machine cannot. Now a days, automation is used everywhere that's why it classify in different categories. Gmail Automation comes under Basic automation.

**B. Scheduling:** It is a process of assigning, arranging and controlling work which is planned to complete in a definite time. The purpose of scheduling is achieve our goal in a planned time, it maximize the utility of resources and reduce the cost.

**C. Smt and SMTP Server:** It stands for Simple Mail Transfer protocol. A set of guidelines used to communicate over the internet across the world using a software as an electronic mail. We can transfer our message from one place to other without physical movement. SMTP is part of TCP/IP/. It acts like MTA (mail transfer agent). First message reach to SMTP server, SMTP server check receipt address – whether it is exists or not and also check authentication of message then transfer to the Target Mail Server. This target mail server deliver message to Receiver’s Computer as Shown in Fig:1. Sender and Receiver both have same or different email platform like Gmail, Outlook, Yahoo.

**D. IMAP:** It stands Internet Message Access Protocol. It is a target mail server, receive messages of sender and store in a Stack. From IMAP server message is then transfer to Receivers system.

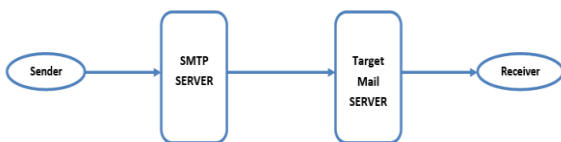


Fig: 1

**Flow of message Transfer:** We use Gmail, Yahoo, Apple mail, Outlook for message/mail transmission. Sender creates a message on web-based mail or Mail user Agent (MUA). Message is first reached to SMTP server where validation of message is checked then submitted to Mail Submission Agent (MSA) after that it passes to Mail Transfer Agent (MTA). MTA check receipt address if it is exist and valid then transfer to Target Mail Server. In target mail server message is deliver to a Mailbox by Mail Deliver Agent (MDA). Imap or POP3 server pop the message from mail box

and transfer to the Receivers Desktop as shown in fig 2.

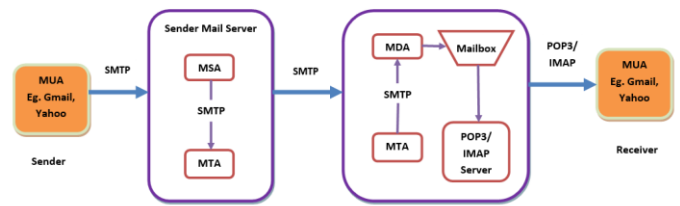


Fig2

**GmailAPI:** It is a restful API used for read and send data. It can also create a mail filter which is used to find and manage messages. It also uses AOutH2 authentication. Enable gmailAPI in developerconsole of Google using url: <https://developers.google.com/gmail/api/quickstart/python/>. Here create our account and it generates a client id. After that using Python script we automate sending mails.

Import requied libraries of python specially “ezgmail”. This is used to login our Gmail account as shown in fig:3

```
>>> import ezgmail, os
>>> os.chdir(r'C:\path\to\credentials_json_file')
>>> ezgmail.init()
```

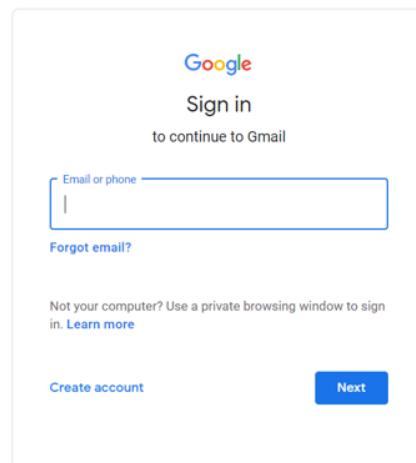


Fig: 3

After that provide recipient email address and also add cc and bcc, Subject of mail, and the content of mail. We can also attaché any file, images, audio, video.

```
>>> ezgmail.send('recipient@example.com', 'Subject  
line', 'Body of the email')  
>>> ezgmail.send('recipient@example.com', 'Subject  
line', 'Body of the email',  
['attachment1.jpg', 'attachment2.mp3'])  
>>> ezgmail.send('recipient@example.com', 'Subject  
line', 'Body of the email',  
cc='friend@example.com',  
bcc='otherfriend@example.com,someoneelse@exampl  
e.com')
```

We can also perform reading mail from our account. EZmail has two object Gmail Thread and Gmail Message. All the gmail messages are enlisted in a Gmail Thread. We can also get list of unread messages and also search particular mail, deleting mails and also download attachments.

We also ensure the security of our account, for that follow http protocols which is used across internet. SMTP protocol is used for mailing purpose. It ensures the security of messages, format our message, encrypt, and then relayed to the recipient. For sending and receiving messages, we use "Smtplib" and "Imapclient" libraries of python.

### III. CONCLUSION

Now a days, automation is become part of our life, it is used in our daily activities. It saves a lots of our time and increase efficiency of work. The advantage of automation, we can do two or more task at the same time and in future we have proposed to implement in other message services like Twitter Instagram etc.and define time when it will do. Here we have explained how bulk email and message sent to be scheduled time.

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#### Cite this article as :

Sushil Chandra, Udai Raj, Rajeev Sonkar, Pragati Srivastava, Varun Pratap Singh, Mohd Ali Asgar Niazi, "Automation for Ease of Life : To Schedule Bulk Messaging and Email System using Python", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 8 Issue 6, pp. 363-365, November-December 2022. Available at doi : <https://doi.org/10.32628/CSEIT228649> Journal URL : <https://ijsrcseit.com/CSEIT228649>