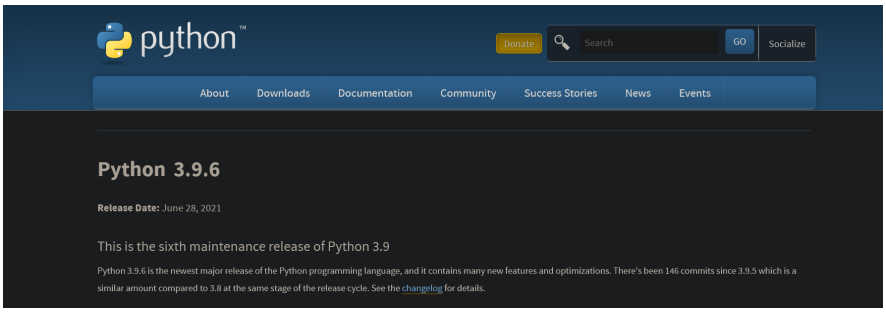
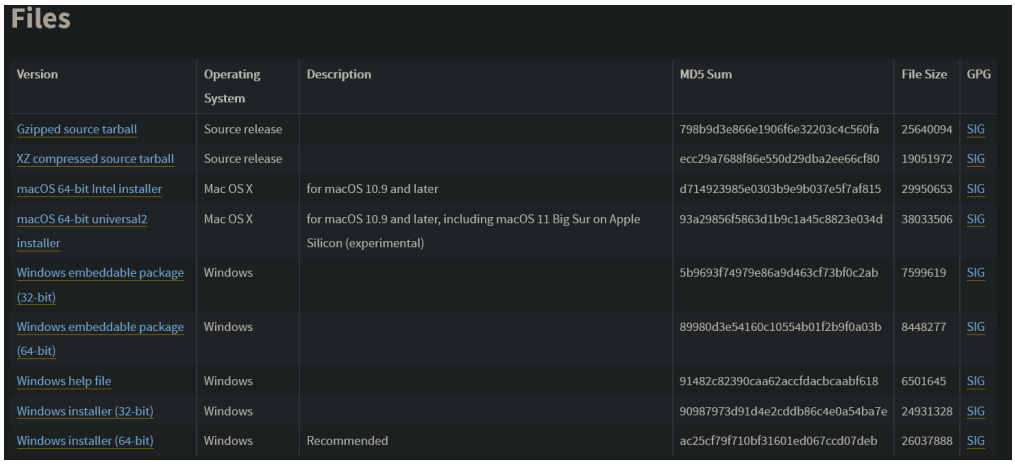
Setup Instructions

1. Installing Python:
    a. Open your web browser and navigate to the Downloads for Windows section of the official Python website.
    b. Search for your desired version of Python. At the time of writing this report, the latest Python 3 release is version 3.9.6.
    c. You will be greeted with a page that looks like this:



    d. Scroll to the bottom of the page and select a link to download either the Windows Installer (32-bit) or Windows Installer (64-bit). We would recommend installing the 64-bit version, which is the last link in the screenshot below. The download size is approximately 25MB.

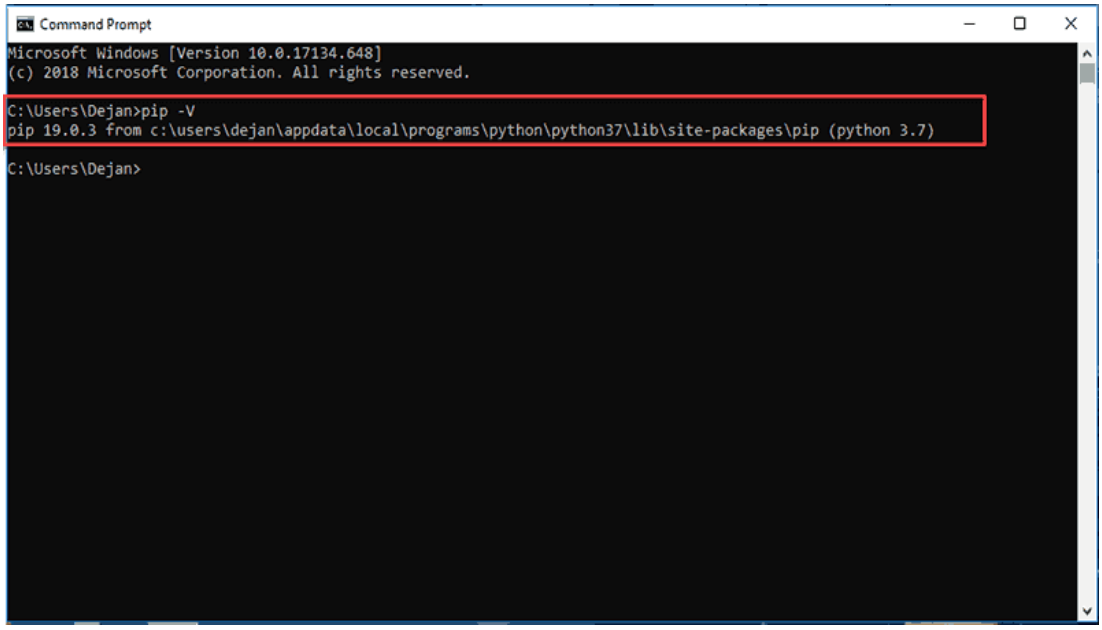


Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		798b9d3e866e1906f6e32203c4c560fa	25640094	SIG
XZ compressed source tarball	Source release		ecc29a7688f86e550d29dba2ee66cf80	19051972	SIG
macOS 64-bit Intel installer	Mac OS X	for macOS 10.9 and later	d714923985e0303b9e9b037e5f7af815	29950653	SIG
macOS 64-bit universal2 installer	Mac OS X	for macOS 10.9 and later, including macOS 11 Big Sur on Apple Silicon (experimental)	93a29856f5863d1b9c1a45c8823e034d	38033506	SIG
Windows embeddable package (32-bit)	Windows		5b9693f74979e86a9d463cf73bf0c2ab	7599619	SIG
Windows embeddable package (64-bit)	Windows		89980d3e54160c10554b01f2b9f0a03b	8448277	SIG
Windows help file	Windows		91482c82390caa62accfdacbcaabf618	6501645	SIG
Windows installer (32-bit)	Windows		90987973d91d4e2cddb86c4e0a54ba7e	24931328	SIG
Windows installer (64-bit)	Windows	Recommended	ac25cf79f710bf31601ed067ccd07deb	26037888	SIG

    e. Run the Python Installer once downloaded.
    f. Select Install Now – the recommended installation options.
    g. Open the Start menu and type "cmd."
    h. Select the Command Prompt application.
    i. Enter `pip -V` in the console.

j. It will look something like this:



k. Pip has not been installed yet if you get the following output:

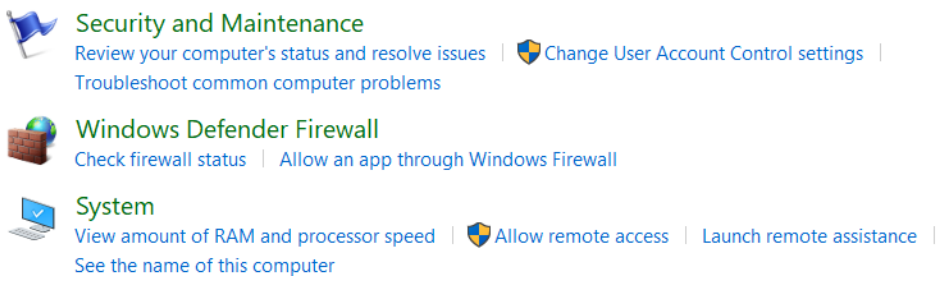
'pip' is not recognised as an internal or external command,
Operable program or batch file.

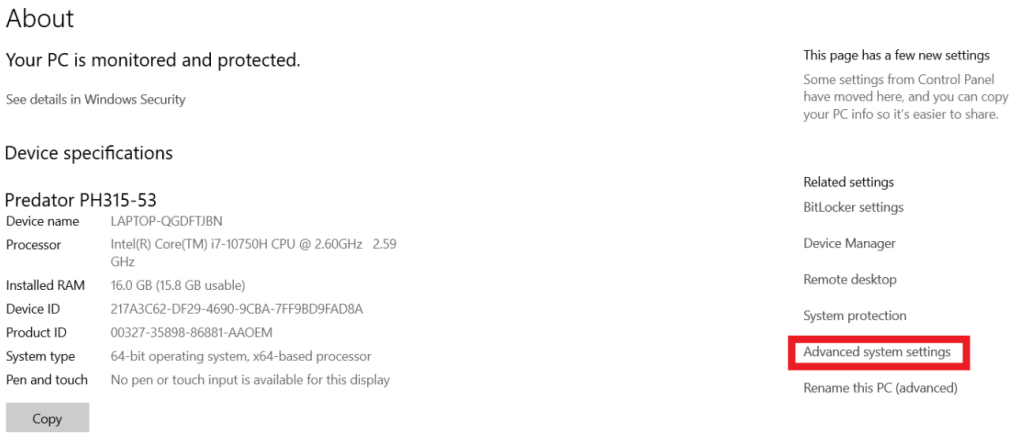
2. Unzip the project archive file which we have provided.
3. Move the PDF, which is to be mailed as an attachment, in the Pdf folder, which has been created after unzipping the files.
4. To install the required libraries:
    a. Open command prompt window.
    b. Move to the project folder using the cd command.
    c. Write “pip install -r Requirements.txt” and hit Enter.
5. We will be saving the sender’s email address and App password in the system’s environment variables for safety and flexibility.
6. How to get your Google App Password:
    a. Enable 2-Factor-Authentication on your Google ID. (This ensures complete security from general social engineering attacks)
    b. Go to your Google profile settings (or click on this link) to access your ‘**APP PASSWORDS**’ menu.

c. Create a new password with the name of your preference and copy the password down on a secure channel. (**Caution: The app password is only shown a single time, and if not copied down immediately, you will have to delete the earlier one and make a new App Password**)
d. After copying the App Password, head on to create new Environment Variables to use them while not sharing them with anyone else. (**Caution: App passwords should be handled with caution since anyone who has your password can access your account. This is why we go ahead with Environment Variables),**

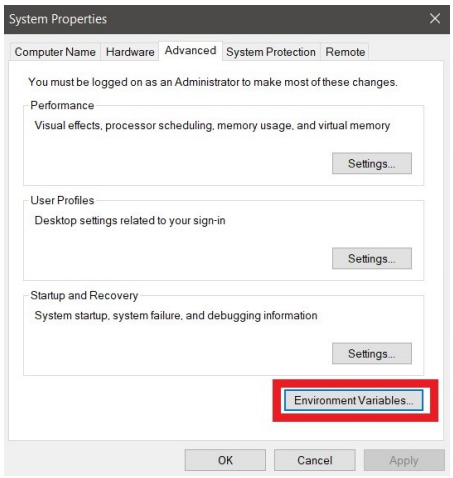
7. How to save ENVIRONMENT VARIABLES:
   a. Open the Control Panel on your Windows desktop and go to '**System & Security**'.

   b. Click on **'System'** and then find the '**Advanced System Settings**' on the right side of the screen.

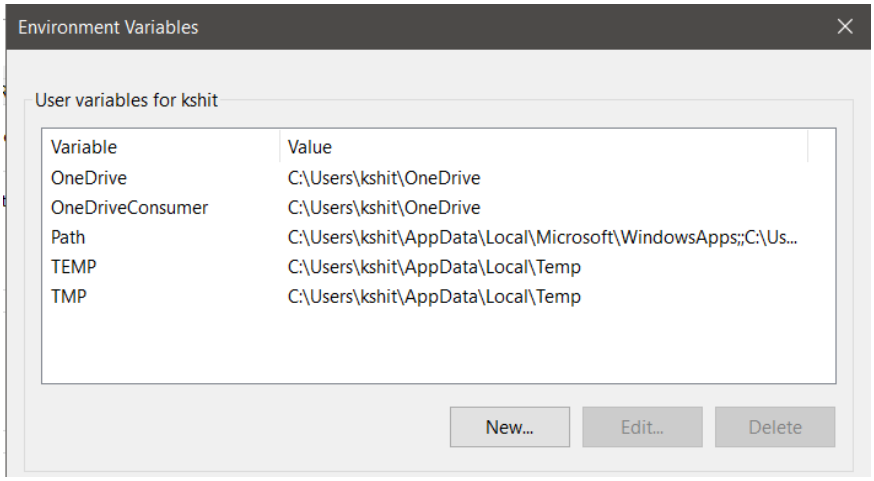




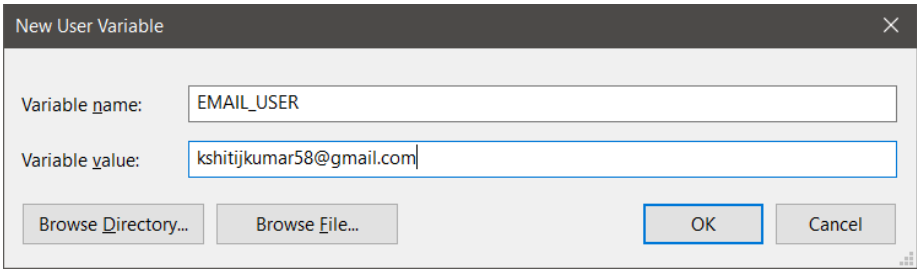
c. After a dialog box pops up, you can see the button '**Environment Variables**' on the lower right corner of the box.



d. Click on the button and then, click on 'New' in the 'User Variables' box to add new environment variables.

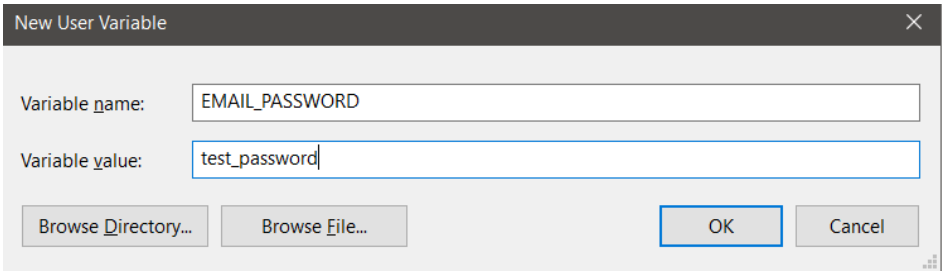


e. Name the first variable, **'EMAIL_USER',** and add the sender mail ID in the "Variable value" box.

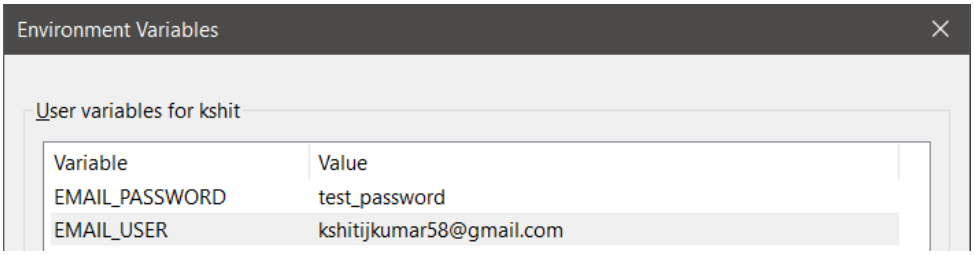


f. Again, click on 'New' in the User Variables box and add another variable, namely, '**EMAIL_PASSWORD**'.

g. You will then add your '**Google App Password**' in the box below the name.



h. Your Environment variables, '**EMAIL_USER**' and '**EMAIL_PASSWORD**' are now ready. (For further doubts regarding the same: Emails | Variables)



8. Setting up the email format in the email.py file:
   a. **msg = EmailMessage()** initialises the Email body that we will be sending.
   b. **msg['Subject']** provides the Email with its subject.
   c. **msg['From']** generally takes in the sender's name and may or may not be used according to the sender's preference.

d. **msg['To']** takes in the recipient's email address, a complete list of email IDs of the recipients taken from the database created initially.
e. **msg.set_content("<message>")** sets the message to be sent along with the Email.
f. As seen in the later lines, we initialise an array of files (in our case, it only has one file) and using the **os module**, we extract its name and the type and add it as an attachment to our Email Body using **msg.add_attachment(<arguments>)**.

```
def create_msg(recipient, attachment):
    msg = EmailMessage()
    msg['Subject'] = ' Important Message'
    msg['From'] = 'Vaibhav Varshney'
    msg['To'] = recipient
    msg.set_content("Hey , whatsup ?")

    files = [attachment]
    for file in files:
        with open(file, 'rb') as f:
            file_data = f.read()
            file_name = f.name
        msg.add_attachment(file_data, maintype='application',subtype='octet-stream', filename=file_name)

    return msg
```

g. The arguments **maintype & subtype** can be changed later on depending on the attachment. Further information about these can be found here.

9. Update the files "Serving Officers.xlsx" and "Retired Officers.xlsx" in the Database folder.
10. Save the original pdf as "Main.pdf" in the Pdf folder.
11. Open **command prompt** (Win + R, and then type **cmd**) and move to the project folder using the 'cd command' as mentioned in Instructions #4.
12. To run the script, in the command prompt, Enter 'python Script.py'.