The following libraries are needed with python3.7 installed on your device to run the tool successfully.

- tkinter
- numpy
- pandas
- matplotlib
- ison
- requests
- sqlite3

Use this link

(https://help.github.com/en/github/authenticating-to-github/creating-a-personal-access-token-for-the-command-line) to generate personal access token of your GitHub profile.

For running the first part of tool (generating data-set according to topic and input parameters),

- 1. Go to folder \uiBackEnd.
- 2. There are 6 files temp.json, temp1.json, temp2.json, temp3.json, temp4.json, temp5.json
- 3. Each of the json files has 2 empty entries, username and password.
- 4. Take 6 github account usernames and their personal access tokens and store them in each of the files. To generate access code for your account, follow this <u>link</u> (https://help.github.com/en/github/authenticating-to-github/creating-a-personal-access-token-for-the-command-line). Alternatively, you can also use your github password in place of using a personal access token, but that is not a recommended practise and should be avoided.
- 5. Run the tool using the command: python ui.py
- 6. Input all the needed inputs and run the script.

For running the second part of tool (generating single repository analysis),

- 1. Run the tool using the command: python ui.py
- 2. If you want details about other user's repositories, input their username in Username (repository owner).
- 3. Input your own username and personal access token in the next 2 fields.
- 4. Choose if you want to include private repositories. If you choose to include private repositories, you would need to have both Username and Username (repository owner) to be the same.

For running the third part of tool (generating data about a single user),

- 1. Run the tool using the command: python ui.py
- 2. If you want details about other user, input their username in Username (search user).
- 3. Input your own username and personal access token in the next 2 fields.
- 4. Choose if you want to include private repositories. If you choose to include private repositories, you would need to have both Username and Username (search user) to be the same.