Readme File

Topic : Process Scheduling Algorithms

- **Softwares to be installed on frontend:**

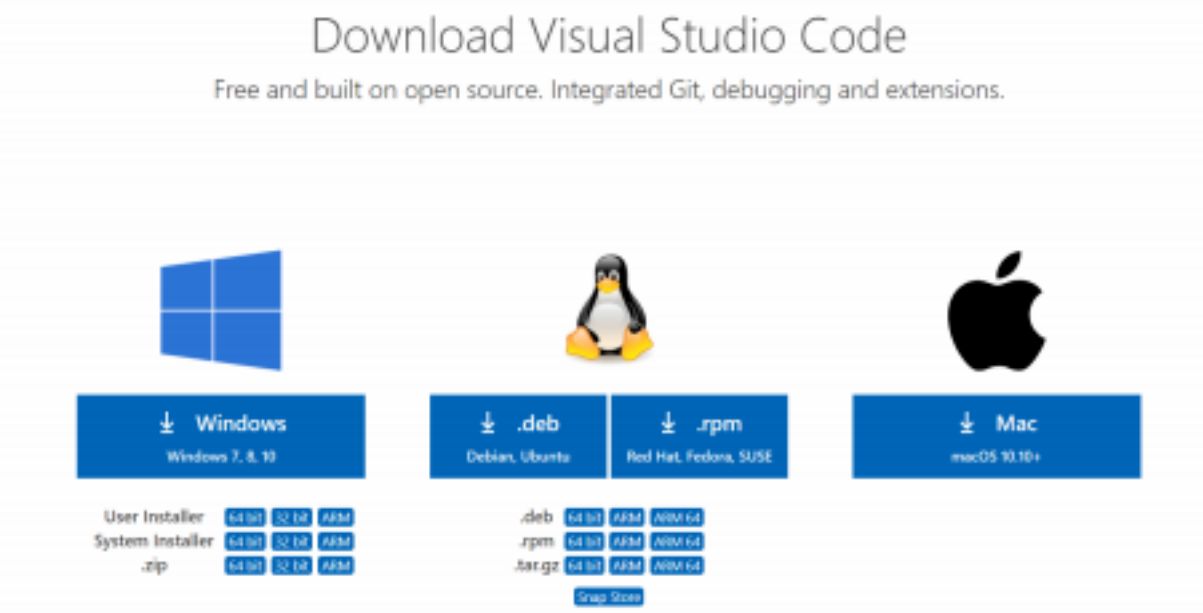
No additional softwares will be required inorder to use our website. You only need a browser such as Google chrome, Mozilla firefox, etc to view the website. To view/modify the code, additional software might be required as mentioned below.

- **Backend Installation:**

For our project, we have used VS code software for the backend of our website. Though, any other text editor can be used if one wants to edit the code. VS code is available for all Operating Systems and can be installed easily. VS code can be downloaded from the link given below.

https://code.visualstudio.com/download

After clicking on this link, it will lead to the download page of VS code which looks as the image below.



- **For Windows,**

Installation:

1. Download the Visual Studio Code installer for Windows.
2. Once it is downloaded, run the installer (VSCodeUserSetup-{version}.exe). This will only take a minute.
3. By default, VS Code is installed under.

   C:\users\{username}\AppData\Local\Programs\Microsoft VS Code.

   - Alternatively, you can also download a Zip archive, extract it and run Code from there.
   - If any problem is faced during or after the installation, the VS code website provides possibly all the solutions to our problems by clicking the link,

   https://code.visualstudio.com/docs/setup/windows

- **For Linux,**

Installation:

You can install it by running:

```
sudo snap install --classic code # or code-insiders
```

Once installed, the Snap daemon will take care of automatically updating VS Code in the background. You will get an in-product update notification whenever a new update is available.

If any problem is faced during or after the installation, the VS code website provides possibly all the solutions to our problems by clicking the link,
https://code.visualstudio.com/docs/setup/linux

- **For macOS,**

Installation:

1. Download Visual Studio Code for macOS.
2. Open the browser's download list and locate the downloaded archive.
3. Select the 'magnifying glass' icon to open the archive in Finder.
4. Drag Visual Studio Code.app to the Applications folder, making it available in the macOS Launchpad.
5. Add VS Code to your Dock by right-clicking on the icon to bring up the context menu and choosing **Options**, **Keep in Dock**.

Launching from the command line#

You can also run VS Code from the terminal by typing 'code' after adding it to the path:

- Launch VS Code.
- Open the **Command Palette** (Ctrl+Shift+P) and type 'shell command' to find the **Shell Command: Install 'code' command in PATH** command.

- Restart the terminal for the new $PATH value to take effect. You'll be able to type 'code .' in any folder to start editing files in that folder.

If any problem is faced during or after the installation, the VS code website provides possibly all the solutions to our problems by clicking the link, https://code.visualstudio.com/docs/setup/mac

- ## Platform dependencies:

There are no platform dependencies. The text editor-VS code is architecture neutral and can be installed on any system having Windows, Ubuntu Linux or macOS. The project can run on any browser according to the system.

- ## Languages used:

  - HTML
  - CSS
  - Javascript

- ## Libraries used:

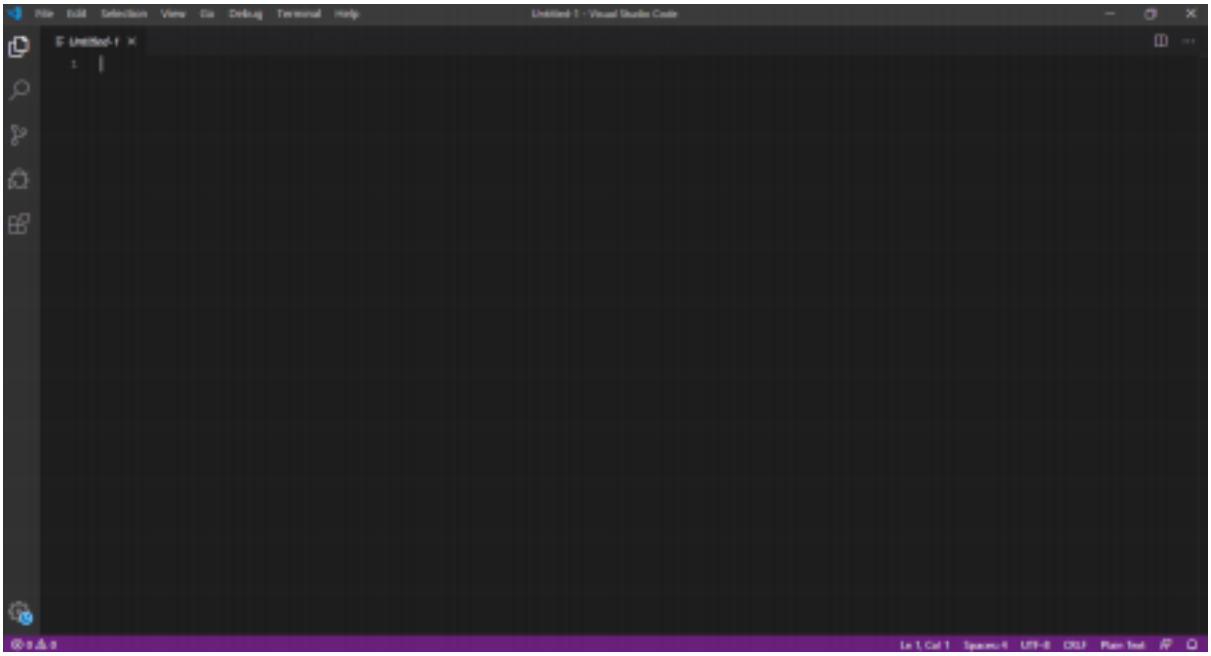
  - JQuery
  - Chart.js

- ## Framework used:

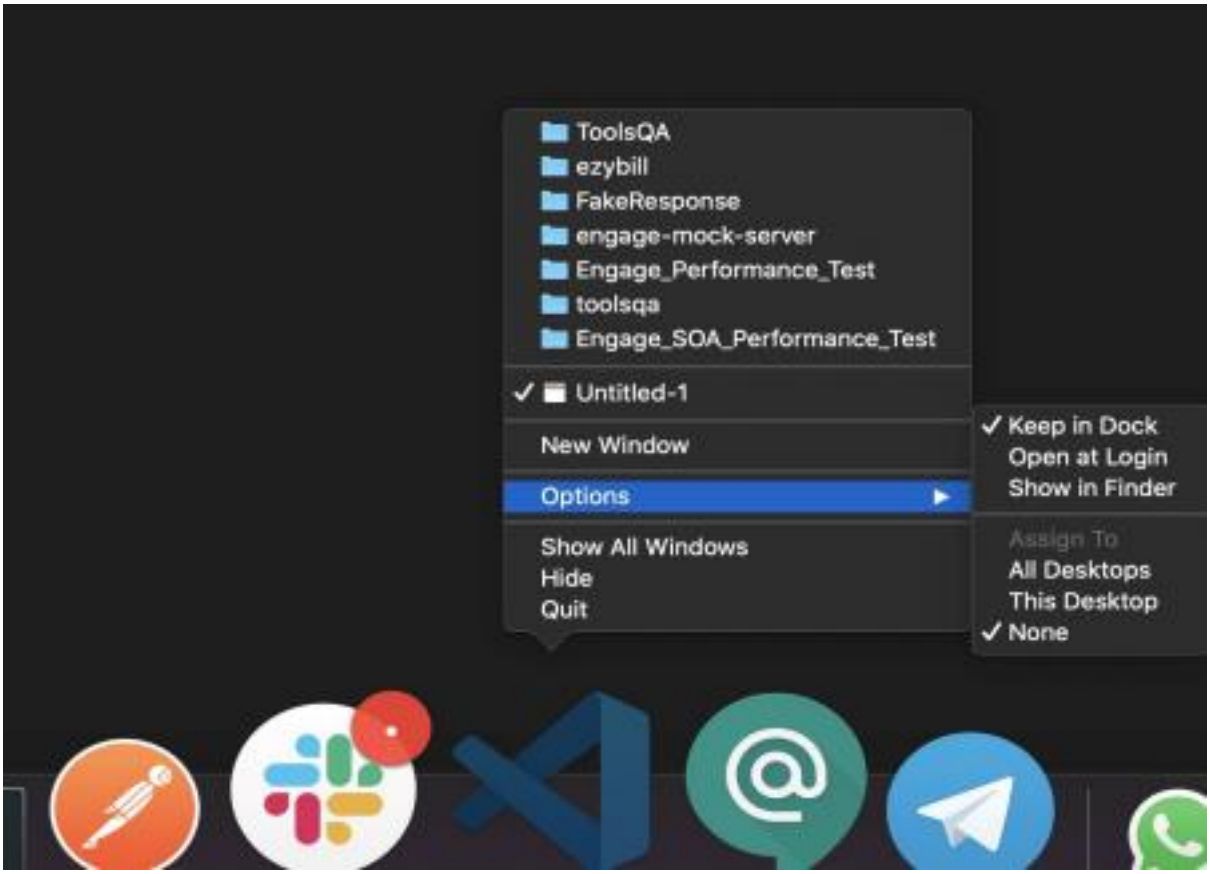
  - Bootstrap

- ## Status of successful installation:

For Windows and linux, the screen will appear as,



For macOS, the screen will appear as,



- **How to run the website?**

- Click the main_page_team_5.html file in the folder.
- You will be directed to the default browser set (Here, Google Chrome). You would be able to see the home page of the website.
- By clicking “Find out more” you would be directed to the information related to CPU scheduling algorithms. To view the demo, click “View demo”.
- You can select any algorithm you want to run. Let us take an example of FCFS Algorithm. In FCFS, click “demo”. Now, you would be directed to another page where the demo can be viewed. If you click on “More info” ,you would be directed to the info page where the information about the algorithm is provided.
- After clicking on the demo, you will be asked to write arrival time and burst time of a process. After writing arrival time and burst time, click on “ADD ROW” to add that process. In case you wrote wrong values or you want to change them, click on “DELETE ROW”.
- If you click on the “EXECUTE” button, the output of the table ,gantt chart and graphs are calculated.
- You would be able to see the tables below “OUTPUT”.

All the other algorithms can be run in the same manner.

- ## Enhancement in the project:

This website presents an option for all computer science students to play and experiment with different concepts of process scheduling in an operating system. It is greatly resourceful, but with more effort, it would be more helpful if this website could cover an even wider number of operating system concepts or use sophisticated animations to enhance the learning experience. On the other hand, the front-end of the website doesn’t seem to require any more changes.It is more than sufficient for educational purposes. That being said, the website still provides students with a chance to test their concepts and thereby help them understand them.