

OS Programming Project Report (Resource Monitor Using Python)

Submitted by:

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Group: A6

Project overview:

- Our team has developed a Resource Monitor web application using Flask, JavaScript, and psutil package.
- The application provides real-time information about CPU usage, memory usage, disk usage, network usage, and the top 10 processes by memory usage.
- This report outlines the project's completion, challenges faced, solutions found, and contribution to this project.

How the group has managed to complete the Project:

- Everyone knew exactly what they were responsible for, making it easier to get things done efficiently.
- We had regular meetings where we could talk about how things were going, what problems we were facing, and come up with solutions together.
- Whenever there was a problem, we all collectively figured it out and shared what we knew to help each other.
- We made sure to write down everything, from how our code works to the decisions we made for the project. This way, everyone could understand what was going on, and it was handy for future reference.

Challenges and Solution:

Challenges Faced:

- 1) Implementing integration between Python, HTML, CSS, and JavaScript using Flask to create a cohesive and interactive web application.
- 2) Exploring the utilization of Ajax or asynchronous JavaScript to enhance the efficiency and responsiveness of web applications.

Solutions:

- 1) To overcome the first challenge, we referred to the following online resources:

<https://realpython.com/python-web-applications-with-flask-part-i/>
(Building web application with Flask)

<https://flask.palletsprojects.com/en/3.0.x/> (Flask Documentation)

- 2) For the second challenge, we referred to:

<https://api.jquery.com/jquery.ajax/> (Applying Ajax and asynchronous JavaScript techniques)

Contribution of Teammates to the Project:

- 1) Abhiraj Gupta (Me):

Made substantial contributions to the project by playing a pivotal role in Flask integration and offered valuable support in implementing JavaScript functionalities.

- 2) Shreyas Shende:

Primarily focused on the Python part, utilizing the psutil package to gather necessary information for the project. Assisted in the integration of the frontend and backend using Flask.

- 3) Ayush Dewan:

Made significant contributions to the front-end development.

- 4) Gaurav:

Collaboratively worked with Ayush, emphasizing front-end development.

Name of teammate who submitted the Project:

Shreyas Shende (ss4897)