

OS Programming Project Report (Resource Monitor Using Python)

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Group A6

- Project Overview

Our team successfully developed a dynamic resource monitor using Python. The project primarily focuses on monitoring Disk, Network Usage, System Boot Time, and Top Processes. Additionally, we implemented a straightforward front-end to present all this information on a single page, simplifying the user's access to essential statistics in one centralized location.

- How the group has managed to complete the project

- ✓ To ensure the successful and efficient completion of the project, responsibilities were evenly distributed among team members.
- ✓ The group engaged in multiple discussions throughout the process to refine ideas.
- ✓ Each team member took ownership of their assigned individual responsibilities.
- ✓ Finally, all the individual work was combined in order to achieve the final output.
- ✓ Regular communication and the hard work of the team members played a key role in building this project within the outlined deadline.

- Problems you faced

There were several problems faced by everyone, but the following were some of the problems that I personally faced while working on my part:

- 1) Usage of the psutil Library: The psutil library, being new to me, required frequent reference to its documentation to grasp its functionalities.
- 2) Integrating Front-end with Python: Making sure the front-end worked smoothly with the Python part using Flask was a bit tricky. It needed a good understanding of how Flask works.
- 3) Deciding the Scope of the Project: Figuring out exactly what to include in the project was tough due to its size. We had to discuss and agree on which features to focus on.

- Places you found the solution

There were 2 main sources which I referred to in order to tackle the challenges :

- 1) <https://pypi.org/project/psutil/> (Official Documentation of psutil).
- 2) <https://flask.palletsprojects.com/en/2.2.x/patterns/javascript/> (Integration of Python with Js through Flask).

- Group Members Contribution Towards the Project
 - 1) Shreyas Shende (Me):
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.
 - 2) Abhiraj Gupta:
Major contributor to the Flask integration and provided assistance with JavaScript implementation.
 - 3) Ayush Dewan:
Played a key role in front-end development.
 - 4) Gaurav:
Worked extensively on the front-end in collaboration with Ayush.
- Name of your teammate who submitted the project : Shreyas Shende (ss4897)