Project Title: Log Analyzer

Objective

Develop a Python script or application that can parse, analyze, and summarize information from system log files. The project aims to provide insights into the system's operational state by identifying patterns, errors, and anomalies in the log data.

Project Description

Inputs

1. Log Files:

- The primary input will be log files, which could be system logs (like `/var/log/syslog`), application logs, or server logs (e.g., Apache, Nginx).
- These files typically contain timestamped entries with information such as date, time, event type, and a message.

2. User Specifications :

- Users can input parameters for filtering logs (e.g., by date, event type, severity level).
- Users can provide search queries for specific keywords or patterns.

Outputs

1. **Summary Reports:** Detailed reports with key statistics and visual data insights.
2. **Visualizations:** Charts or graphs highlighting log data trends.
3. **Timestamps:** A timestamp at the start of each downloaded log file, marking the download date and time.

GitHub Repository

Team members must actively contribute to and document the project on GitHub, with regular commits.

README File

Develop a README with detailed instructions on setup, operation, and functionalities.

Project Report

1. list all team members with their names and student numbers at the start.
2. Write a concise report in Word format outlining the project's goals, architecture, data processing, and key findings.
3. Include a brief section on different types of logs and their relevance.