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Web Server Analysis

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Abstract: This is a design and implementation of a Web Server. "WEB SERVER ANALYSIS" is a software developed for managing log files on the server. Web log analysis is an innovative and unique field constantly formed and changed by the convergence of various emerging Web technologies. Due to its interdisciplinary character, the diversity of issues it addresses, and the variety and number of Web applications, it is the subject of many distinctive and diverse research methodologies. This project deals with the analysis of the log files of a web server.
Keywords: Web server, Log files, Error, URL, Resources

I. INTRODUCTION

Current software application often produce (or can be configured to produce) some auxiliary text files known as log files. Such files are used during various stages of software development, mainly for debugging and profiling purposes. Use of log files helps testing by making debugging easier. It allows following the logic of the program, at high level, without having to run it in debug mode. Nowadays, log files are commonly used also at customer's installations for the purpose of permanent software monitoring and/or fine-tuning. Log files became a standard part of large application and are essential in operating systems, computer networks and distributed systems. Log files are often the only way how to identify and locate an error in software, because log file analysis is not affected by any time-based issues known as probe effect. This is an opposite to an analysis of a running program, when the analytical process can interfere with time–critical or resource–critical conditions within the analyzed program. Log files are often very large and can have complex structure. This system is designed in such a way that log file analysis could be an easy task that requires low resources, less time and short procedures.

II. OBJECTIVES

The basic objective of the web server is to store, process and deliver web pages to the users.

1) Identify problematic pages or sections that cause search engines to waste resources, crawling low value or invalid URLs.
2) Monitor the HTTP status

This project gives the following as the output:

3) Date and Time
4) IP addresses
5) Log Files
6) Connection Status

III. LITERATURE SURVEY

Sr. No	Paper Title/Publication Details	Description	Procedure
1.	Rizgar et al	Analysis study to evaluate the performance and availability of the sever	Without attacks, with SYN and HTTP attacks.
2.	Barzu et al	To show the effect of hardware scalability on the web server performance	Modification and Request Handling
3.	G. Liu et al	Design of the web servers like Apache, Nginx and Lighttpd	Big data analyze environment

4.	Prakash et al	Analytical study to indicate the scalability, efficiency, and responsiveness of Apache and Nginx by measuring, RAM usage, error rate, and response time.	Response Time and Memory Usage measurement
5.	L. P. Chitra and R. Satapathy	Comparison study between Node.JS and the traditional IIS	Evaluation of the performance of Web Server in different
6.	J. Chen and W. Cheng	Web traffic analysis	Web server requirements with the improvement of internet technology.
7.	C. Chen et al	Queuing model to analyze the web server performance based on several web page sizes and a various number of users	Response time and bandwidth as metrics of performance

IV. PROBLEM DEFINITION

A Web log is a listing of page reference data. Sometimes it is referred to as click stream data because each entry corresponds to a mouse click. Logs can be examined from either a client perspective or a server perspective. So in order to provide better service along with enhancing the quality of websites, it has become very important for the website owner to better understand their customers. The Web now is the heaviest user of bandwidth on the Internet. Solutions to some of the examples will likely require use of multi-cast. Any Web protocol deployed must deal with issues that affect the network. The Web needs to scale up to handle the high load cases and analysis should be done for the clear way of the uses which will provide fast and safe service to the user with minimum errors.

A. Existing System:

Current software application often produce (or can be configured to produce) some auxiliary text files known as log files. Such files are used during various stages of software development, mainly for debugging and profiling purposes.

B. Proposed System:

In our system each and every interaction of web user with the web will be recorded or stored in a text file which is basically called as Web Log File. These web log files will be in ".txt" format. Each interaction of user with web or server will be recorded as a single record in web file containing logs. These server log files are used to understand or study behaviour of the web users. The data which is stored in web log files will be consisting of date&time, connection status, error and users. Kindly it's little difficult to deal with whole data which are in huge amount of size. So, unwanted or uninterested data can be removed by processing the data.

V. REQUIREMENT ANALYSIS

Overall system performance should correspond to the size of log files and complexity of analytical tasks.

A. Hardware Requirements

1) Users Processor: Pentium IV and above Processor speed: 1.2 GHz Onwards
2) System memory: 128 MB minimum (256 MB recommended) Cache size: 512 KB
3) RAM: 2 GB (Minimum)
4) Network card: Any card can provide a 100mbps speed Network connection: UTP or Coaxial cable connection
5) Mouse: 104 keys US Key Serial, USB or PS/2
6) CPU: x86 or x64

B. Software Requirements

1) Technology Implemented: Apache Server
2) Language Used: PHP, tkinter
3) User Interface: Python
4) Web Browser: Mozilla, Chrome or Internet Explorer 8(or newer)
5) Software: Visual Studio Code
6) Operating System : Windows XP or Higher Versions

VI. SYSTEM DIAGRAM

A. Data Flow Diagram

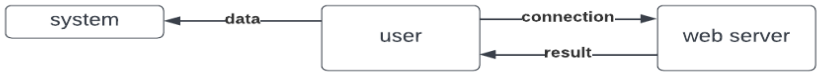

Fig. 1 Data Flow Diagram of the project

B. Use Case Diagram

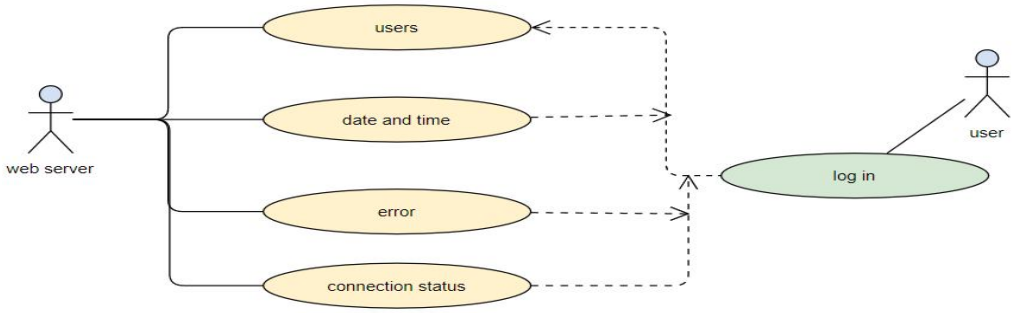

Fig. 2 Use Case Diagram of the project

VII. RESULT ANALYSIS

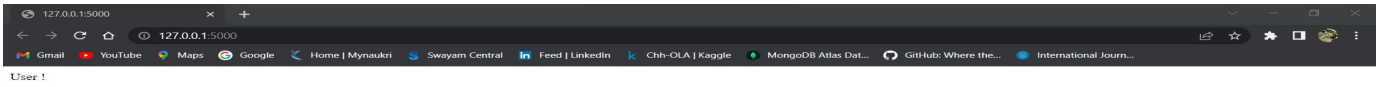

Fig. 3 Server

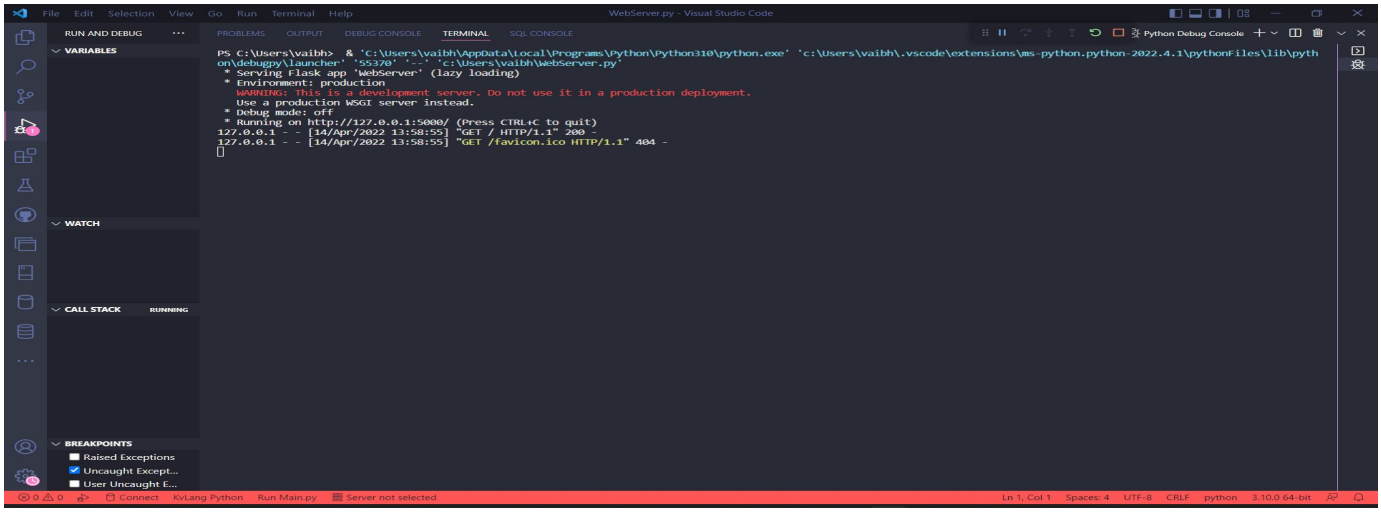

Fig. 4 Log File

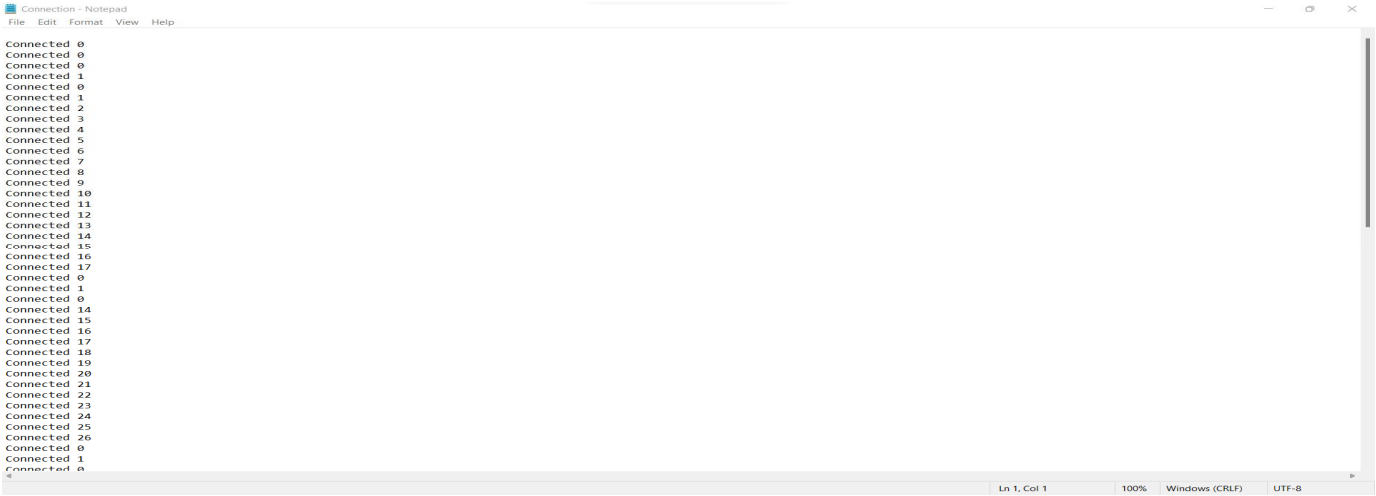

Fig. 5 Connections

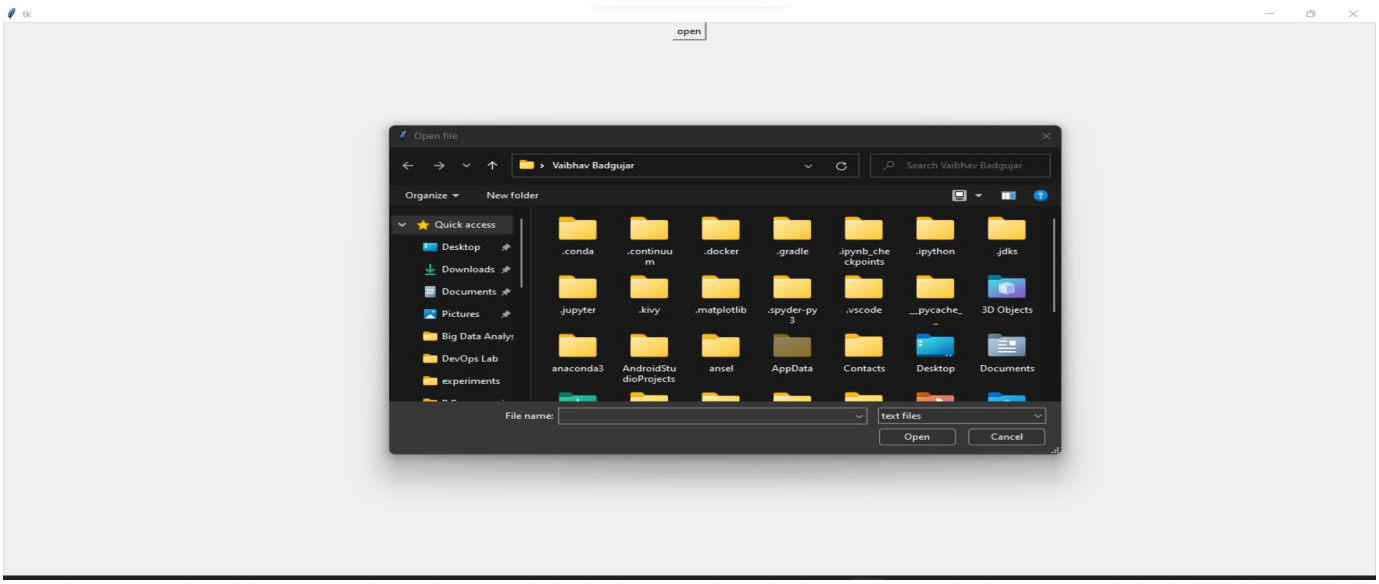

Fig. 6 GUI of Open Frame

VIII. CONCLUSION

To conclude the description about the project, the project, developed using Python with tkinter is based on the requirement specification of the user and the analysis of the existing system, with flexibility for future enhancement. WEB SERVER ANALYSIS is very useful for analysis. This Web Server software is designed for everyone from any secto

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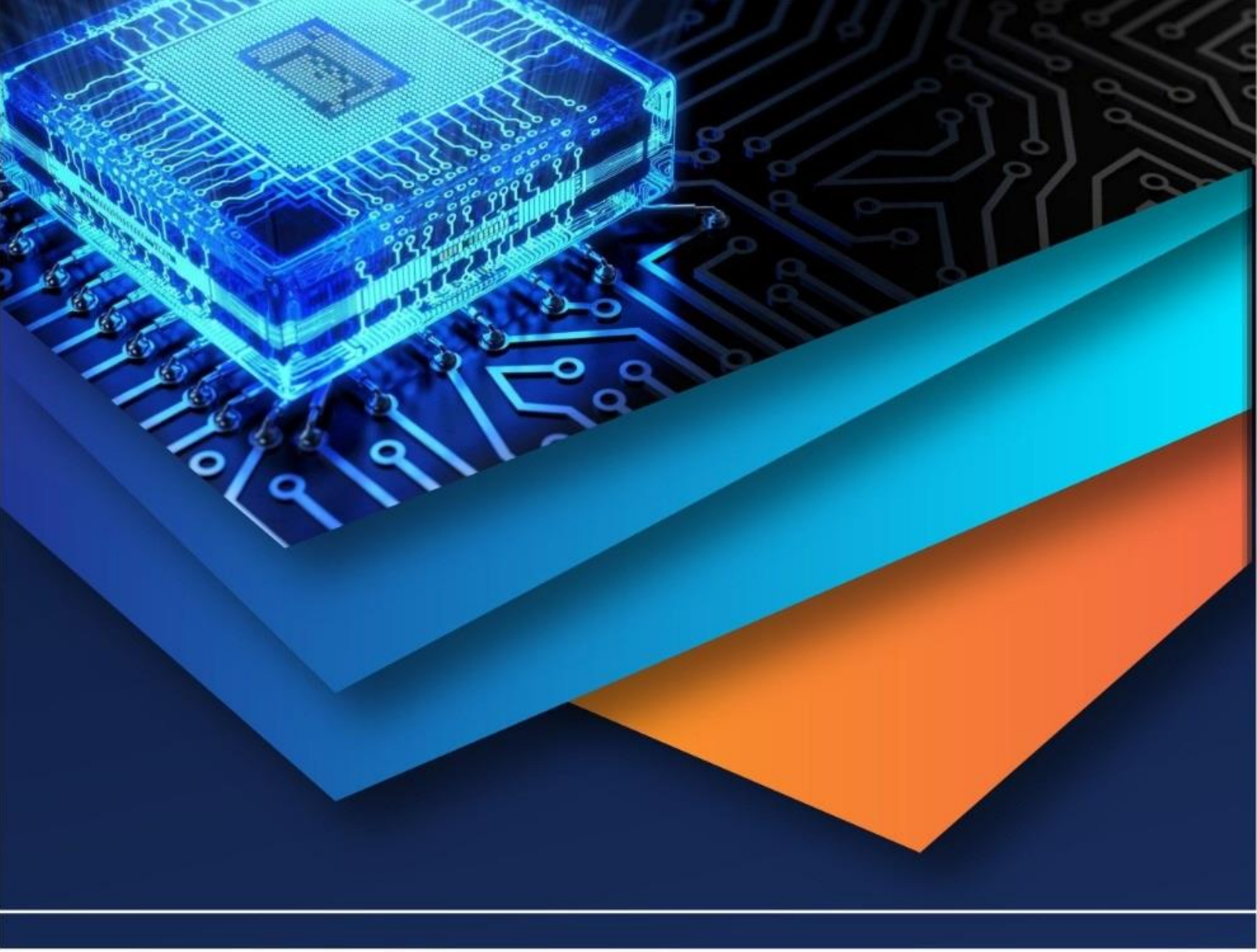

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