ABSTRACT

The File Monitoring System is a Python-based application designed to provide users with real-time vigilance over their files. It operates through a user-friendly web interface where users input their email addresses and passwords, which are used for notification purposes. Upon uploading files, individual threads are created to continuously compute and compare cryptographic hashes of their content. If any unauthorized modification is detected, an immediate email notification is dispatched to the user, specifying the affected file.

This application serves as a proactive security measure, enhancing data integrity and confidentiality by promptly alerting users to any alterations. Its primary aim is to offer users a watchful eye on their crucial files. By delivering real-time alerts for unauthorized changes, it empowers users to take immediate action, whether that involves investigating the cause or restoring the original file. This proactive approach towards file security ensures that data remains intact and confidential, even in the face of potential threats.

One of the key strengths of the File Monitoring System lies in its ability to provide real-time monitoring, enabling swift responses and interventions in the event of any suspicious activities. The user-friendly interface further enhances its effectiveness, allowing users to easily select and monitor files. Additionally, the inclusion of email notifications ensures that users are promptly informed, even when they are not actively using the application. The system also supports simultaneous monitoring of multiple files, making it suitable for a wide range of use cases. Furthermore, the application employs cryptographic hashing, a reliable method for detecting even the slightest modifications, ensuring robust data integrity..