CODTECH Internship - Task 1 Report

Task Title: File Integrity Checker

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Objective:

To develop a Python-based tool that ensures file integrity by calculating and comparing SHA-256 hash values of files. This tool helps detect file modifications, additions, or tampering.

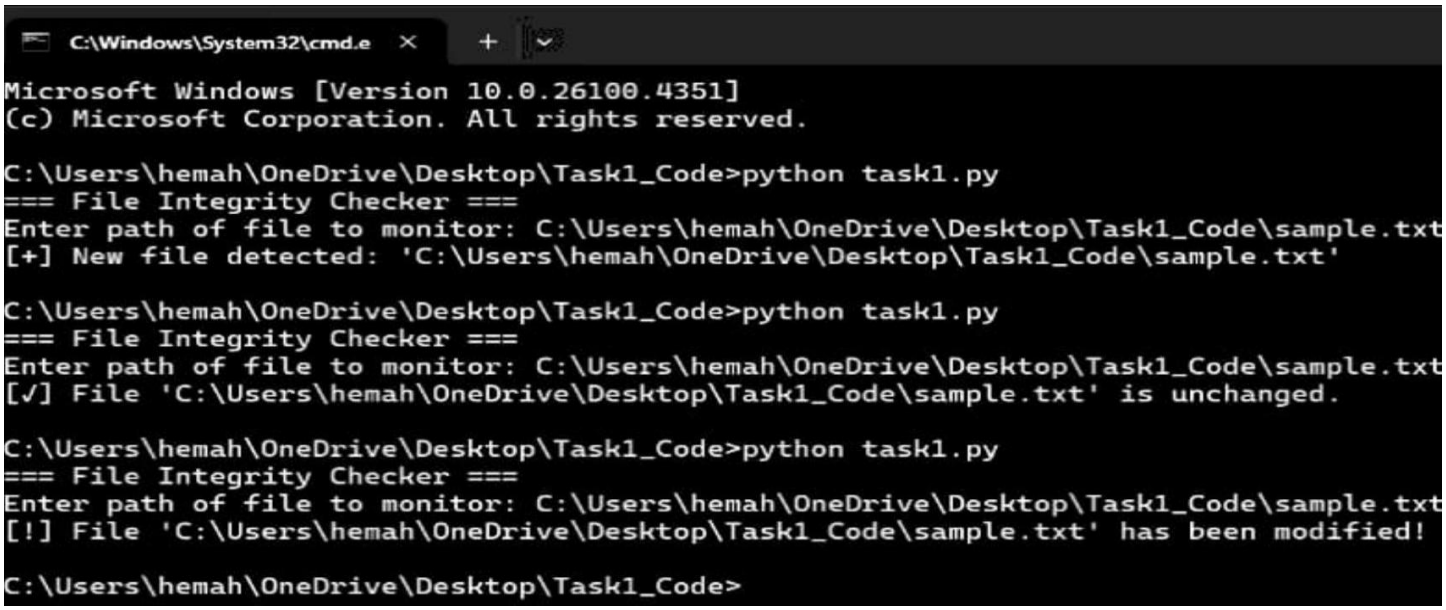
Technologies/Libraries Used:

- Python
- hashlib
- os
- json

Implementation Summary:

1. Created a Python script named 'task1.py'.
2. The script calculates the SHA-256 hash of any file provided by the user.
3. It compares the current hash with a stored hash in 'file_hashes.json'.
4. Based on comparison, it displays whether the file is new, unchanged, or modified.
5. The result is printed on the command prompt and hashes are stored for future reference.

Execution Screenshot:



Conclusion:

The File Integrity Checker tool is successfully implemented. It accurately detects new, modified, and unchanged files by utilizing hash comparison. This completes Task 1 of the CODTECH Cybersecurity Internship.