

**LAB 1: Hashing Lab. Exercise 1:**

**Q. Which file do you think is the original copy of the Calculator and which one is the tampered with copy?**

**Output:** On comparing the generated hash values of all Calculator, Calc1 is the original copy as it matches with the given hash value. And all other Calculator (Calc2, Calc3) generates different hash values. **Original:** Calc1.

**Tampered:** Calc2, Calc3.

```

Microsoft Windows [Version 10.0.19042.1165]
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C:\Users\aksha>cd Downloads
C:\Users\aksha\Downloads>cd WinHashLab 2
C:\Users\aksha\Downloads\WinHashLab 2>cd WinHashLab
C:\Users\aksha\Downloads\WinHashLab 2\WinHashLab>fciv.exe -sha1 Calc1.exe
//
// File Checksum Integrity Verifier version 2.05.
//
fd71e6e1a9ff1738e831a64d8e7c39f2b90d7476 calc1.exe
C:\Users\aksha\Downloads\WinHashLab 2\WinHashLab>fciv.exe -sha1 Calc2.exe
//
// File Checksum Integrity Verifier version 2.05.
//
22bcf16bf0b24dbe7819ff977e522358c22a53d2 calc2.exe
C:\Users\aksha\Downloads\WinHashLab 2\WinHashLab>fciv.exe -sha1 Calc3.exe
//
// File Checksum Integrity Verifier version 2.05.
//
2ac44d814a377a7d9397e7638a88b45f25ff5b10 calc3.exe
C:\Users\aksha\Downloads\WinHashLab 2\WinHashLab>

```

**fd71e6e1a9ff1738e831a64d8e7c39f2b90d7476**

**Fig 1:** Command Prompt Output showing generated hash values for different Calculators.

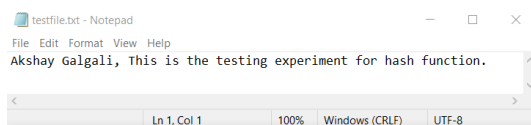
**Exercise 2:**

**Q. What do you notice about the hash value computed after making the changes?**

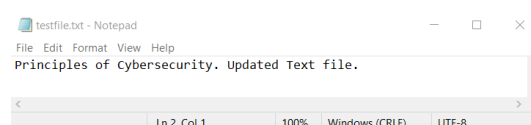
**Output:** The hash value of the text file completely changes after altering the file.

**Q. What do you notice about the hash value now?**

**Output:** The Hash value of the text file after changing it to the original text, it displays the same hash value as before.



**Fig 2:** Original Text File.



**Fig 3:** Altered Text File.

```

C:\Users\aksha\Downloads\WinHashLab 2\WinHashLab>fciv.exe testfile.txt
//
// File Checksum Integrity Verifier version 2.05.
//
aa4e42cf3eeceb80d6b0c7e31edb75d5 testfile.txt
C:\Users\aksha\Downloads\WinHashLab 2\WinHashLab>fciv.exe testfile.txt
//
// File Checksum Integrity Verifier version 2.05.
//
5c8ca05b1c5cb49b61b403a13f0601ca testfile.txt
C:\Users\aksha\Downloads\WinHashLab 2\WinHashLab>fciv.exe testfile.txt
//
// File Checksum Integrity Verifier version 2.05.
//
aa4e42cf3eeceb80d6b0c7e31edb75d5 testfile.txt

```

**Fig 4:** Command Prompt Output showing generated hash values for Original and Altered text file.