

UNIVERSITY OF SCIENCE AND TECHNOLOGY OF HANOI
Information and Communication Technology Department



Lab Work Day 2

Digital Forensic

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Ha Noi, 06 November 2024

Lab 3:

Objective:

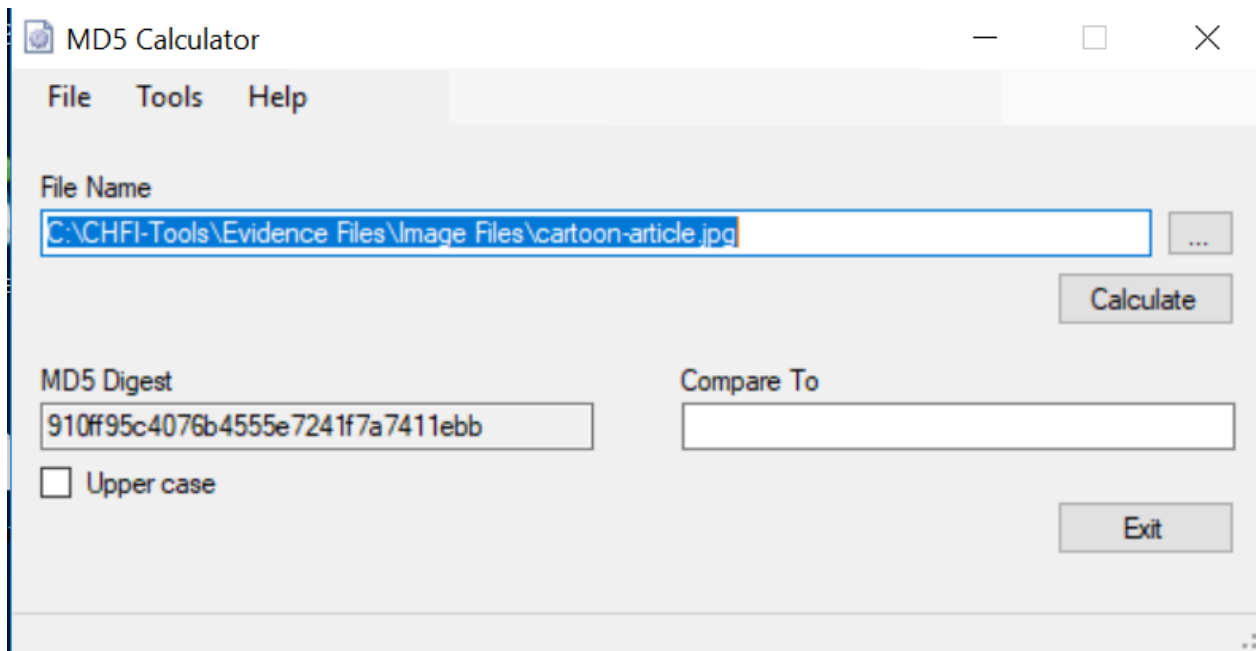
This lab focuses on generating and comparing MD5 hash values to verify the integrity of files, a crucial task in computer forensics to ensure that files have not been tampered with.

Lab Environment:

- **Platform:** Windows Server 2016
- **Requirements:** Administrative privileges, pre-installed MD5 Calculator, internet access.

Procedure:

1. **Locate the Files for Analysis:**
 - Navigate to `C:\CHFI-Tools\Evidence Files\Image Files` where the files for hash calculation are stored.
2. **Calculate Hash Values:**
 - Right-click on a target file (e.g., `cartoon-article.jpg`) and select MD5 Calculator from the context menu to calculate its hash value.
- 3.

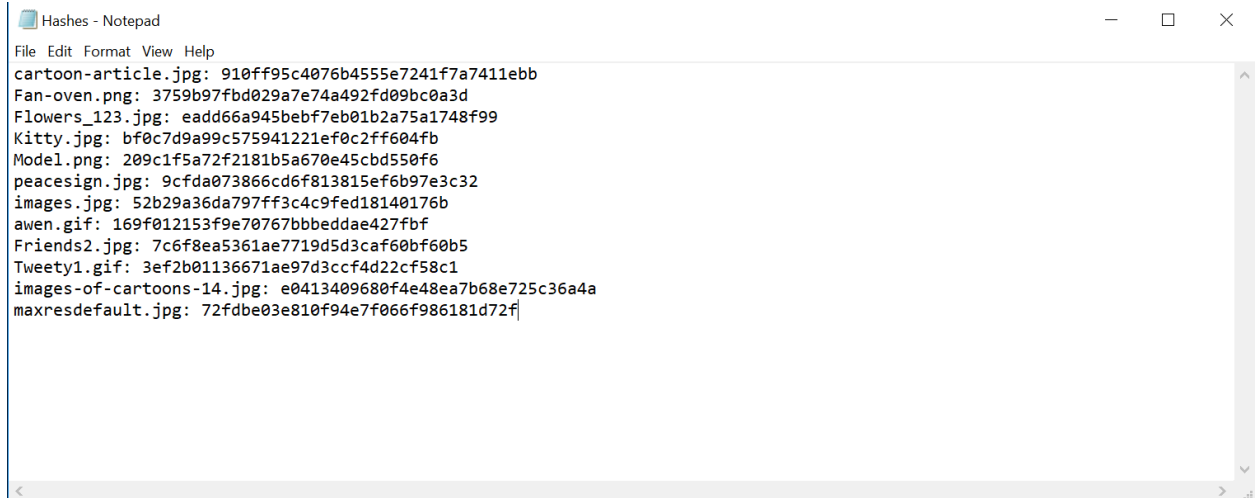


4.
 - View the generated hash value in the MD5 Calculator window.
5. *[Insert Image: Displayed Hash Value in MD5 Calculator]*

6. Access Pre-existing Hash Values:

- Open the **Hashes.txt** file located at **C:\CHFI-Tools\Evidence Files\Image Files** to view the pre-existing hash values.

7.

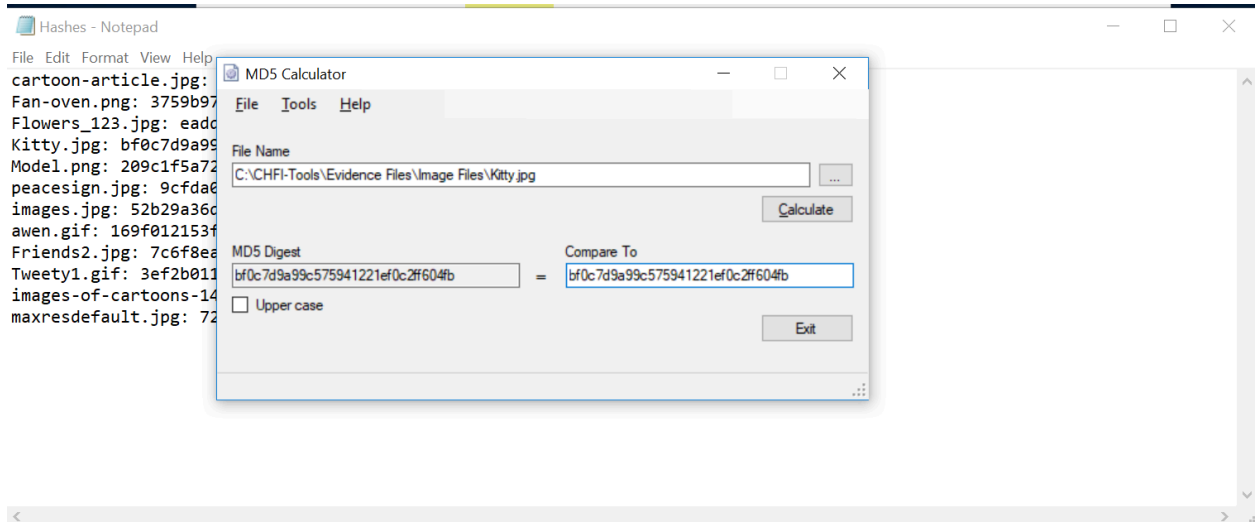


```
File Edit Format View Help
cartoon-article.jpg: 910ff95c4076b4555e7241f7a7411ebb
Fan-oven.png: 3759b97fbd029a7e74a492fd09bc0a3d
Flowers_123.jpg: eadd66a945bebf7eb01b2a75a1748f99
Kitty.jpg: bf0c7d9a99c575941221ef0c2ff604fb
Model.png: 209c1f5a72f2181b5a670e45cbd550f6
peacesign.jpg: 9cfda073866cd6f813815ef6b97e3c32
images.jpg: 52b29a36da797ff3c4c9fed18140176b
awen.gif: 169f012153f9e70767bbbeddae427fbf
Friends2.jpg: 7c6f8ea5361ae7719d5d3caf60bf60b5
Tweety1.gif: 3ef2b01136671ae97d3ccf4d22cf58c1
images-of-cartoons-14.jpg: e0413409680f4e48ea7b68e725c36a4a
maxresdefault.jpg: 72fdb03e810f94e7f066f986181d72f
```

8. Compare Hash Values:

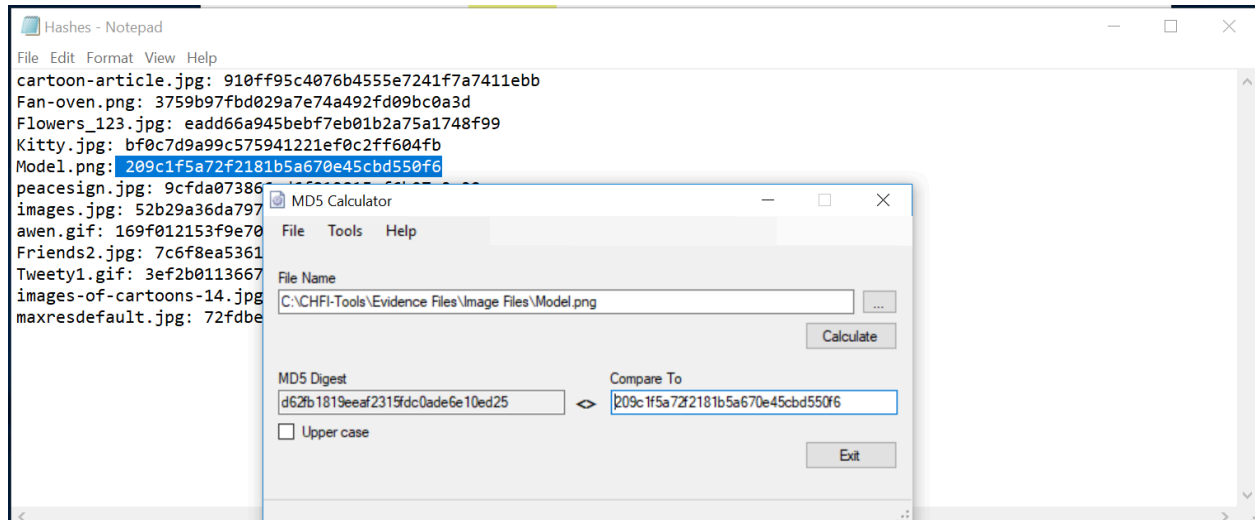
- For each file, such as **Kitty.jpg**, copy the hash value from **Hashes.txt** and paste it into the Compare To section of the MD5 Calculator after calculating the file's current hash.

9.



- Check if the hash values match. A matching hash confirms the file's integrity, while a mismatch suggests potential tampering.

10.



- Repeat the comparison for other files, such as **Model.png**, to ensure all files are verified.