Objectives:

- Use HashCalc to determine the hash values of the files.
- Use HxD Hex Editor to change a single byte in a file.
- Use Hashcalc Re-hash the files.
- Use HxD Hex Editor to examine the end of each file and determine the difference.

1. Open / Install Access Data's FTK Imager 3
2. Select File > Add Evidence Item > Select Image File > Browse to *Vader_Home_Computer.001* image and add it.
3. Navigate to the *C:\Documents and Settings\Owner\My Documents\Secret pics* folder.
4. Export the "Secret Pics" folder to your local hard drive.
5. On your computer, examine the three pictures inside the Secret pics folder. Using Windows, right click on the three provided pictures and record the size of each file.

   me & the guys1.jpg size: _____

   me & the guys2.jpg size: _____

   me & the guys3.jpg size: _____

6. Open each image and describe the contents.

   me & the guys1.jpg Description: _____

   me & the guys2.jpg Description: _____

   me & the guys3.jpg Description: _____

7. Are the pictures all identical? _____
8. Install Hashcalc.exe.
9. Use Hashcalc to calculate the hashes of all 3 files. Record the Md5 Hash value for each file.

   me & the guys1.jpg Md5 Hash: _____

   me & the guys2.jpg Md5 Hash: _____

   me & the guys3.jpg Md5 Hash: _____

10. Install the HxD Hex Editor on your computer and open it.

11. In HxD, select “open” under the file menu. Open one of 2 duplicate files. You know they are duplicate because they have an identical hash.

12. Go to the bottom of the file and change the last byte by selecting it and typing any character.

13. Select “Save as” under “File” and save this picture under a different name.

11. Use Windows to record the file size and hash calc for the md5 hash of the new file new file.

New File:

Description:_____

Size: _____

Md5 Hash: _____

14. Based on the results of this test, what are your thoughts on the reliability of Md5 as a “digital fingerprint”?

_____

_____

_____

14. Use HxD to examine the last few bytes of each of the files provided and record anything that might be of suspicion.

_____

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15. Based on your answer to the previous question, do you think it may be possible for criminals to effectively hide information within a jpeg file? Why?

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