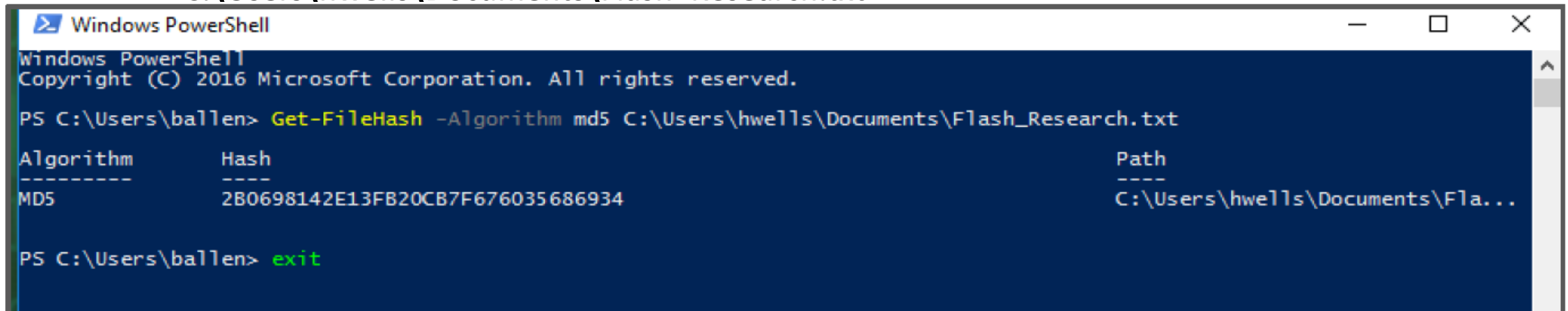


How to identify the MD5 Hash file (Windows)

- What is a Hash?
 - It is a method to determine the integrity of a file, by producing a unique string of letters and numbers with a algorithm (mathematical formula) that results in only one possible result, for the same file.
 - As long as a file has not been changed in any way, it's hash value will always be the same. In this way, we can verify a file and it's data have not been tampered with by unauthorized users.
- How to do it?
 - Press the **Start** button -> Type **powershell** -> Press **Enter**.
 - In the PowerShell window, type "**Get -FileHash -Algorithm md5 (directory to the file)**
C:\Users\hwells\Documents\Flash Research.txt



```
Windows PowerShell
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PS C:\Users\ballen> Get-FileHash -Algorithm md5 C:\Users\hwells\Documents\Flash_Research.txt

Algorithm      Hash
-----
MD5            2B0698142E13FB20CB7F676035686934
Path
C:\Users\hwells\Documents\Fla...
```

How to identify the MD5 Hash file (Ubuntu)

- How to do it?
 - Open Terminal
 - Use the **md5sum** command with the file name to get the hash value
 - Use **man** page to identify options for command

```
GNU nano 2.9.3  
this is a document to test the md5 hash value
```

```
GNU nano 2.9.3  
this is a document to test the md5 hash value.
```

Notice the difference in hash values when a single period is added to the document.

```
cal@ubuntu:~/Documents$ md5sum test.txt  
ac56b532608709bbe9dade8b19f08c08  test.txt
```

```
cal@ubuntu:~/Documents$ md5sum test.txt  
110f8401ca02b86db31cb09171c9cbb2  test.txt
```

Identify file owner and searching files (Windows 10)

- To identify who the owner is of a file on Windows 10
 - Navigate to the file/folder and **Right Click** on the file
 - Select **Properties** -> At the top of the Window, select the **Security** tab
 - At the bottom of the screen, select the **Advanced** button
 - At the top of the window, it will display the file name and the file owner
- Searching for files
 - At the top of file explorer window, to the right is a search bar
 - *. is a command used to search for ALL files of a certain type
 - If you want to find all mp3 files on a computer, navigate to the top directory of the C drive
 - In the search bar, type ***.mp3** and all the mp3 files will be located and displayed
 - You can search for any file extension ***.docx *.pdf *.txt** and so on...

Identify file owner and searching files (Ubuntu)

- To identify who the owner is of a file in Ubuntu
 - Navigate to the file/folder and **Right Click** on the file
 - Select **Properties**
 - **Or**
 - Open Terminal -> Navigate to file
 - Command: **ls -l <file_name>**
- Searching for files
 - At the top of file explorer window, click the magnifying glass icon
 - *. is a command used to search for ALL files of a certain type
 - **Or**
 - Open Terminal
 - Command: **locate <file_name>**