**Level 1: Windows File Systems**

Refer to the following document when answering the questions for Level 1.

<https://fossbytes.com/fat32-vs-ntfs-vs-exfat-difference-three-file-systems/>

1. What is the definition of a file system?

In computing, a file system or filesystem controls how data is stored and retrieved. Without a file system, information placed in a storage medium would be one large body of data with no way to tell where one piece of information stops and the next begins.

1. What are the three file systems used on Windows computers?

FAT32, NTFS, exFAT are three different files systems used to store data in a storage device. Created by Microsoft, these file systems have their own set of pros and cons which you might want to know and will help you choose the correct file system for different needs.

1. What are the properties of the FAT file system?
   1. The FAT file system was the original Windows 95 file system. When was it introduced?

Started in 1977 with the original 8-bit FAT file system.

* 1. How is the FAT16 file system different from the FAT32 file system?

FAT32 surmounted the limited volume size offered by the FAT16 file system.

* 1. What is the file size limit of the FAT32 file system?

FAT32 allows you to store files of size up to 4GB.

* 1. What is the disk size limit of the FAT32 file system?

The maximum disk size can go up to 16TB.

* 1. What other devices currently use the FAT file system?

1. What are the properties of the NTFS file system?
   1. The NTFS file system is what is used on current Windows computers. When was it introduced?
   2. How is the NTFS file system different from the FAT file system?
   3. What is the file size limit of the NTFS file system?
   4. What is the disk size limit of the NTFS file system?
   5. What are some notable features of the NTFS file system?
   6. What are some limitations regarding how other devices support the NTFS file system?
2. Provide a summary of the exFAT file system.

**Level 2: Windows NTFS Permissions**

Refer to the following document when answering the questions for Level 2.

<http://www.ntfs.com/ntfs-permissions.htm>

1. Read the information provided on the “Setting Permissions” page.
   1. Summarize how to view and set file and folder permissions.
   2. Select a file or folder on your student drive.
   3. Summarize the permissions set on your file/folder. (using words and a screen shot)
2. Read the information provided on the “Advanced Permissions” page.
   1. List the advanced permissions that affect files.
   2. List the advanced permissions that affect folders.
3. Read the information provided on the “Basic Permissions” page.
   1. The basic permissions are listed at the top of the columns in the table. List the 6 basic permissions.
   2. What basic permissions allow a user to write data to a file?
   3. What basic permissions allow a user to delete a folder?
4. Why do you think there are separate permissions for reading and writing a file? Provide an example where you might want somebody to read a file but not be able to change it.
5. Why do you think there are separate permissions for listing folders and reading files? Provide an example where you might want somebody to be able to list a folder but not be able to read a file in the folder.

**Level 3: Windows Share Permissions**

Refer to the following document when answering the questions for Level 3.

<https://blog.netwrix.com/2018/05/03/differences-between-share-and-ntfs-permissions/>

1. What are share permissions?
   1. Who do share permissions affect?
   2. Who do share permissions not affect?
   3. Summarize the 3 types of share permissions.
2. Summarize the main difference between NTFS and Share Permissions.
3. Summarize how to view and change share permissions.

**Level 4: Your Files and Folders**

1. Organized your files and folders on your network drive to match your GitHub repository.
   1. Create a folder on your student drive for Computer Science Work
   2. Create sub-folders (e.g. Topic A, etc.) to match the folders on your GitHub repository
   3. Move your answer files and other work you have done for this course into the proper sub-folders.
   4. Show your organized folders/files to Mr. Nestor
2. View and list some of the important NTFS permissions that have been set on your files and folders.
3. View and list some of the important Share permissions that have been set on your files and folders.