**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?

* A set of rules used to decide how data is stored and fetched in a storage device.

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

* FAT32
* NTFS
* exFAT

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?

1997 was when the first FAT file system was introduced.

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

FAT32 offers a higher volume size, 32 bits.

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

The system can’t install heavy apps so you do not need to worry about the fil and disk size limits.

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

FAT32, NTFS, and exFAT are the three file systems we commonly use for Windows and storage media running on Android and various other devices.

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?

It was introduced in 1993

* 1. How is the NTFS file system different from the FAT file system?
  2. What is the file size limit of the NTFS file system?

16EB-1KB

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

16EB

* 1. What are some notable features of the NTFS file system?

Reparse points, sparse file support, disk usage quotas, distributed link tracking, and file-level encryption.

* 1. What are some limitations regarding how other devices support the NTFS file system?

Its space.

1. Provide a summary of the exFAT file system.

* exFAT is another Microsoft file system.
* Modern digital cameras use exFAT
* High capacity of sdxc memory cards are formatted with exFAT since it is lighter than NTFS and will face no issues copying full length hd movies unlike with FAT32
* Launchd in 2006, has 16EB file size limit but unlike ntfs, it does not carry extra features

**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. 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