**Lab 6**

**Lab Conditions:**

This lab exercise to be completed by the end of the class. No late submission will be accepted

Submit World document file on D2L

Make sure your following naming format as listed below:

Last name, First Name: \_\_\_Markus Afonso\_\_\_\_ Student ID: \_\_\_A01333486\_\_\_

1. Create a E: drive (named “data”) on our Windows VM

You can follow the given video with one difference (Choose FAT32, instead of NTFS)

(Reference: <https://www.youtube.com/watch?v=_HgjasKuOBw>)

Paste your screenshot of disk management

A screenshot of a computer

Description automatically generatedGraphical user interface, application

Description automatically generated

2. Converting a FAT32 Partition to NTFS (Virtual Machine)

1. Copy some folders to the E: drive.
2. Select Start, and then type cmd into the Search box to open a command prompt.
3. In the Command Prompt dialog box, type Convert E: /fs:ntfs and press Enter.
4. After the conversion process is complete, close the Command Prompt dialog box.
5. Do the folders you copied in step 1 still exist on the partition?

Yes

1. Paste your screenshot of disk management
2. Graphical user interface, text

   Description automatically generated

Challenge: Suppose that you choose to convert a partition from FAT32 to NTFS. If the conversion has not yet taken place how can you cancel the conversion?

Crtl + C or force quitting cmd

2. Configuring Disk Quotas (**Screenshot**) (Virtual Machine)

1. Open Windows Explorer.
2. Right-click the local disk (C:), and choose Properties.
3. Click the Quotas tab.
4. Click  button
5. Check the “Enable quota management” check box.
6. Check the “Deny disk space to users exceeding quota limit” check box.
7. Click the “Limit disk space to” option, and then enter 1000MB in the box.
8. Enter 750MB in the Set Warning Level to box.
9. Click the Apply button. If a warning box appears, click OK. This warning is just informing you that the disk may need to be rescanned for the quota.
10. Now that you have set up an umbrella quota to cover everyone, close the disk quota tool.
11. Graphical user interface, text, application

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12. What is basic disk? What is dynamic disk?

A basic has limited features compared a dynamic disk. A dynamic disk can have a volume added. That volume can be expanded or shrunk depending on if theres room on the dynamic disk. During the process, data is not changed after shrinking or expanding. Seperate dynamic disks can be combined into together by spanning to act as a single drive. Although, this should be avoided as it increases the risk of a failure because if one drive fails the spanned drives all fail. A basic disk must be converted into dynamic for these features.

1. What is RAID? Why do we need RAID? RAID 0, 1, 5?

RAID is when drives are combined to act as one drive. Unlike spanning drives, drives in RAID work together to read and write data, thus resulting in faster read/write speeds. There are different types of RAID:

0 - two or more drives combined act as one drive, if one fails all data is lost or corrupt.

1 mirroring - usually two drives, one drive copies the other, if one fails the data is still recoverable. Only half of the total storage is usable as the other half is used for security.

5 single parity - many hard drives store pieces of each other. These pieces can be used to repair failed drives, but it impacts computer performance.

We use RAID because hardware can fail, and when it does, if a set of drives are in RAID data can be recovered.