BACKING UP YOUR COMPUTER

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CLASS OBJECTIVES

- Learn how to store your computer's content safely in case of catastrophic failure.

- Explore back up options for both Microsoft and Apple computers.

- Examine both online and offline methods of backup

WHAT DOES "BACKING UP" MEAN?

- In relation to Information Technology, "backing up" is the process of copying an archiving computer data. A backup is used to recover lost data or recover data from an earlier time.

- Typically two main types of backups: file backups and system backups.

- File Backups: A backup of individual, or groups of, files (such as documents, pictures, and movies). File backups do not consume as much space as system backups.

- System Backups: A backup of the entire operating system (including programs, files and settings). System backups can take up tens to hundreds of gigabytes of space.

HOW DOES MY COMPUTER STORE MY DATA

HARD DISK DRIVE (HDD)

SOLID STATE DRIVES (SSD)

EXTERNAL HARD DRIVE

WHY IS BACKING UP IMPORTANT

- If a HDD or SSD breaks, all the data inside is lost.

- An HDD or SSD can also become corrupted. Recovering data from a corrupted drive is a very complex and often expensive process. There is also zero guarantee that any data will be recovered.

MICROSOFT WINDOWS AND APPLE MAC OS

OFFLINE VS ONLINE

- OFFLINE BACKUP: The process of backing up data to a physical hard drive or storage device (Including hard drives, USB flash drives & SD cards).

- ONLINE BACKUP: The process of backing up data to a cloud storage (remote) location. Typically using a backup service.

OFFLINE BACKUP

- Requires an additional hard drive.

- Can be done manually or scheduled to run at set times.

- Keeps data local (not stored in the cloud).

- Can be done using built-in Microsoft or Apple backup programs or using purchasable backup software.

- It is free after the initial purchase of a hard drive or other backup device

BACKING UP IN WINDOWS 7 & 10

- Microsoft Windows offers a built in tool to backup your data. Users can select a connected hard drive, and schedule or run backups.

- Windows 7: Control Panel > System and Security > Backup and Restore > Set up backup

- Windows 10: Settings > Update & Security > Backup > Add a drive

BACKING UP IN APPLE MAC OS

- Mac OS computers offer a built-in backup program called "Time Machine".

- Mac also offers a device called the Airport Time Capsule. It is a hard drive device that connects wirelessly to your computer to backup your data. (Requires Wi-Fi)

ONLINE BACKUP

- Requires and internet connection.

- Can be done manually or scheduled to run at set times.

- Data is stored in a remote location

- Multiple options and services available

- Typically requires a paid subscription to a cloud backup service

ONLINE BACKUP

- To begin, users must choose an online backup service. These are paid services that typically range from $5.99 to upwards of $55.99 per month depending on the amount of space and type of service you choose.

- If you cancel your service, you usually have roughly a month to retrieve your data. After that it is deleted from the service.

CLOUD STORAGE

- Not technically a backup option

- Requires an internet connection

- A great way to manage data for users who utilize public machines or don't desire to work with their own physical storage

GOOGLE DRIVE & DROPBOX

ONEDRIVE & ICLOUD

BACKING UP YOU PHONE

- iPhone – iPhone has an iCloud backup option available in the settings menu. Users are given 5GB of free storage with the option to upgrade for a fee.

- The iPhone can also be connected to a computer and backed up to the computer using iTunes.

- Android – Google Backup & Restore is a great utility for Android users. You can activate it by going into Settings > Accounts > Google Account

- Android can also be connected to a computer and backed up using SyncDroid or other similar applications.

RAID (REDUNDANT ARRAY OF INDEPENDENT DISKS)

- RAID links together multiple hard drives. There are multiple "levels" of RAID that link together hard drives in different ways.

- The most common is RAID 1

- RAID 1 creates an exact copy (or mirror) of data onto two or more drives. If one drive breaks, the other still contains the exact same data.

LINKS TO BACKUP INSTRUCTIONS

- Mac OS: https://support.apple.com/en-us/HT201250

- Windows 7: https://support.microsoft.com/en-us/help/17127/windows-back-up-restore

- Windows 10: https://support.microsoft.com/en-us/help/17143/windows-10-back-up-your-files