MINNESOTA TECH FOR SUCCESS

Week 1 & 2: Introduction to IT

10/23/2024

Agenda

Announcements

Classroom (1 – 1:30pm)
- Laptop Registration & setup
- Introduction to Basic IT Terms & Concepts

Break (5 min)

Classroom (1:35 – 2:30pm)
- HTML/CSS: Esther

Break (5 min)

Warehouse (2:35 – 3:30pm)
- Intro to intake part 2

ANNOUNCEMENTS

Announcements for 10/23

- **Next Session:** Wednesday, 10/30
  - No Session on Wednesday, 11/6 – Teacher PD Day

- Name tags
- Media Release forms
- Etiquette

- Activity
  - Laptop Registration & Setup

ACTIVITY

Work Laptop Registration & Setup

Work Laptop: Registration

1. Walk up to the cart for a **work laptop & charger**
2. Enter the Part Number into the spreadsheet next to your name
3. If there are any issues with the laptop, list the defects on a note and return it with the laptop to the cart

Work Laptop: Setup

1. Click through the Windows setup process
2. Wi-Fi
    1. Select network: MTFS_Guest
    2. Enter Password: **Guest2024**
3. Do not name your device – skip for now
4. Select – Setup for personal use
    1. Sign in or Create a Microsoft account email (Outlook or Hotmail) if you do not have one – keep it professional

Information Security

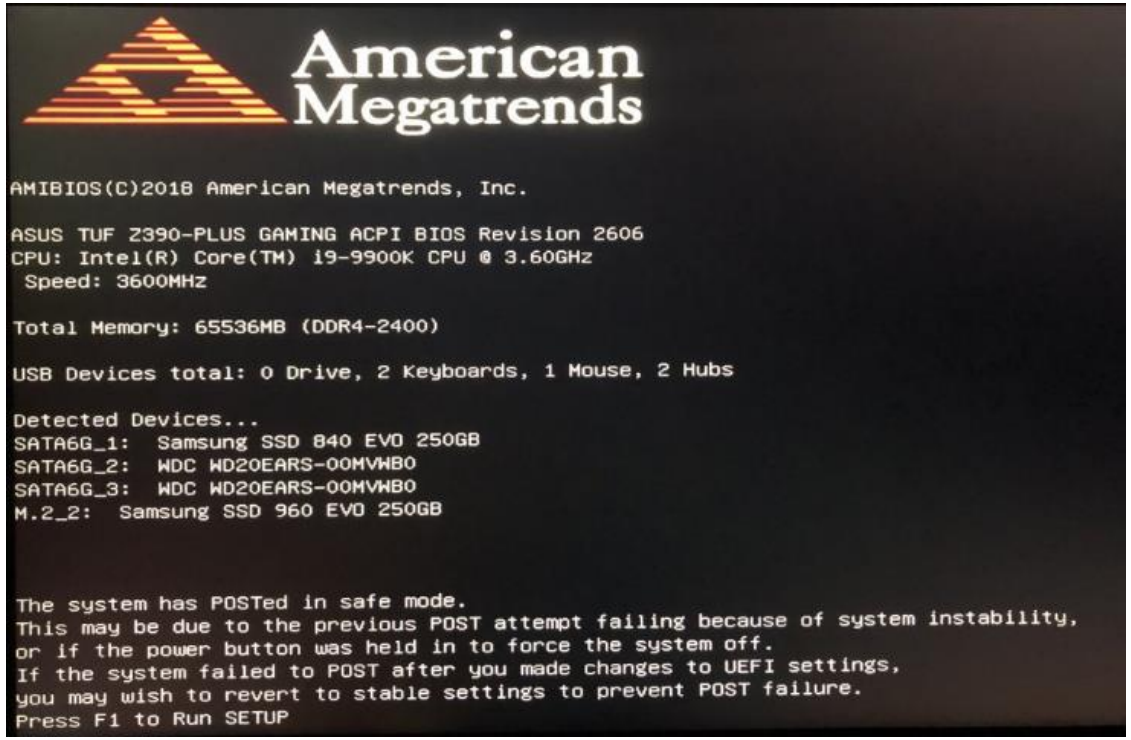
Database & Network Management

Computer Technical Support

Business Software Development

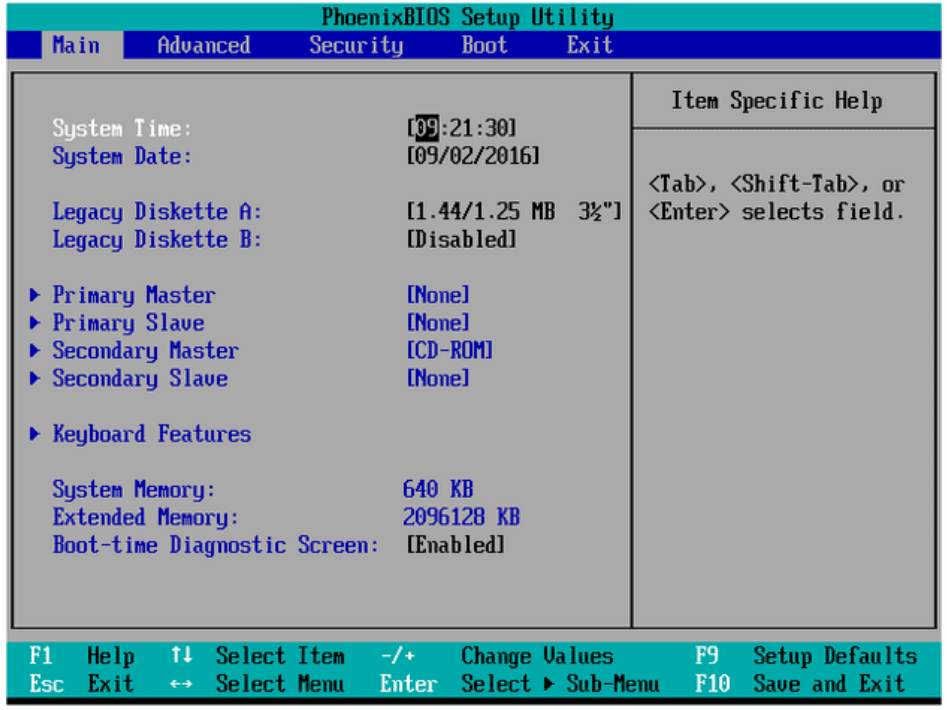
Intro to basic IT terms & concepts

POST (*Power On Self Test):* the initial set of diagnostic tests performed by the computer right after it's powered on, with the intent to check for any hardware related issues.



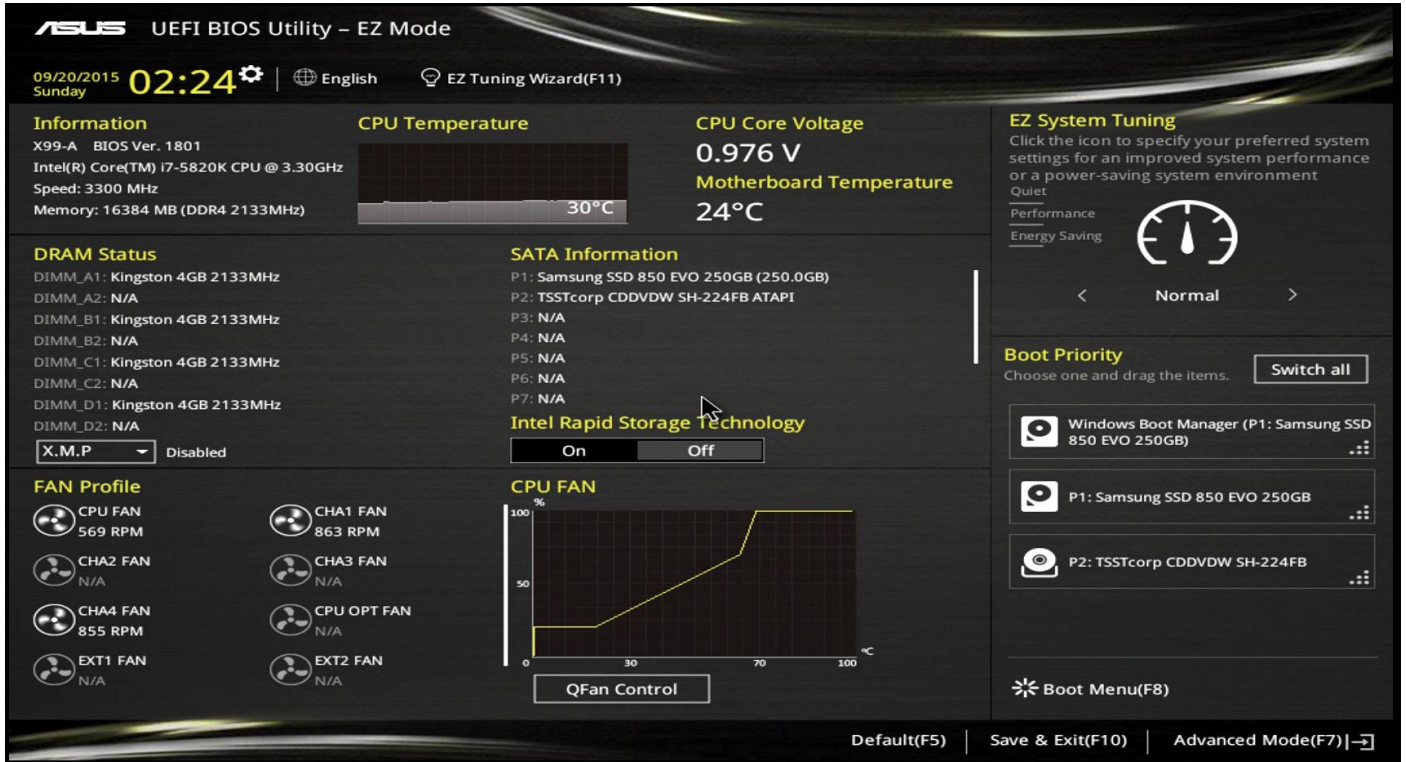
Intro to basic IT terms & concepts

BIOS (basic input/output system): Firmware used to perform hardware initialization during the booting process. It Uses the Master Boot Record (MBR) to save information about the hard drive data.



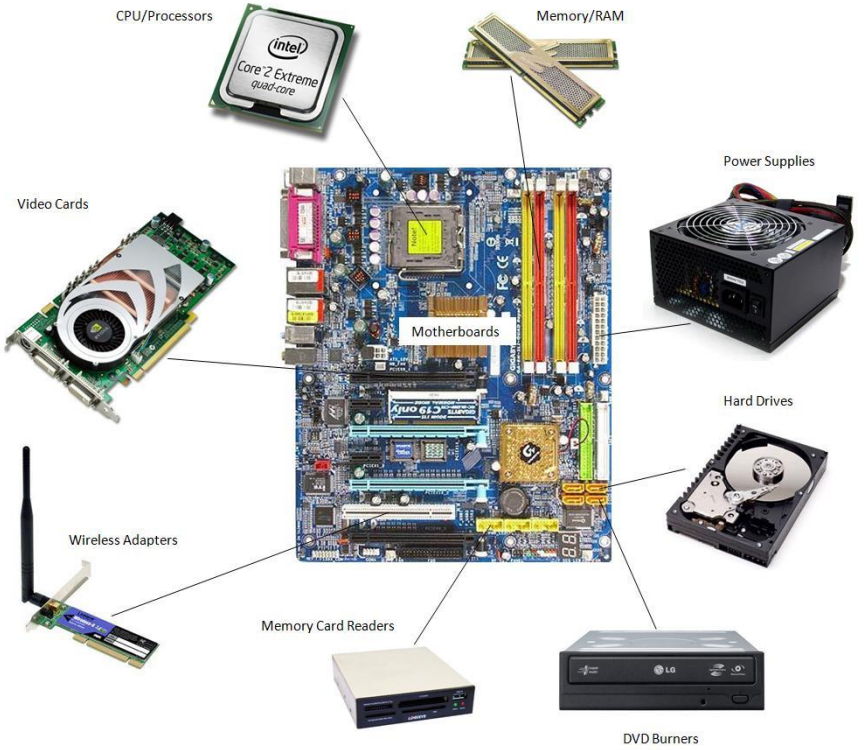
Intro to basic IT terms & concepts

UEFI (Unified Extensible Firmware Interface): Firmware interfaces for hardware with faster boot times, larger hard drive support, and a **user interface**. It offers features like Secure Boot and networking capabilities that were absent in BIOS.



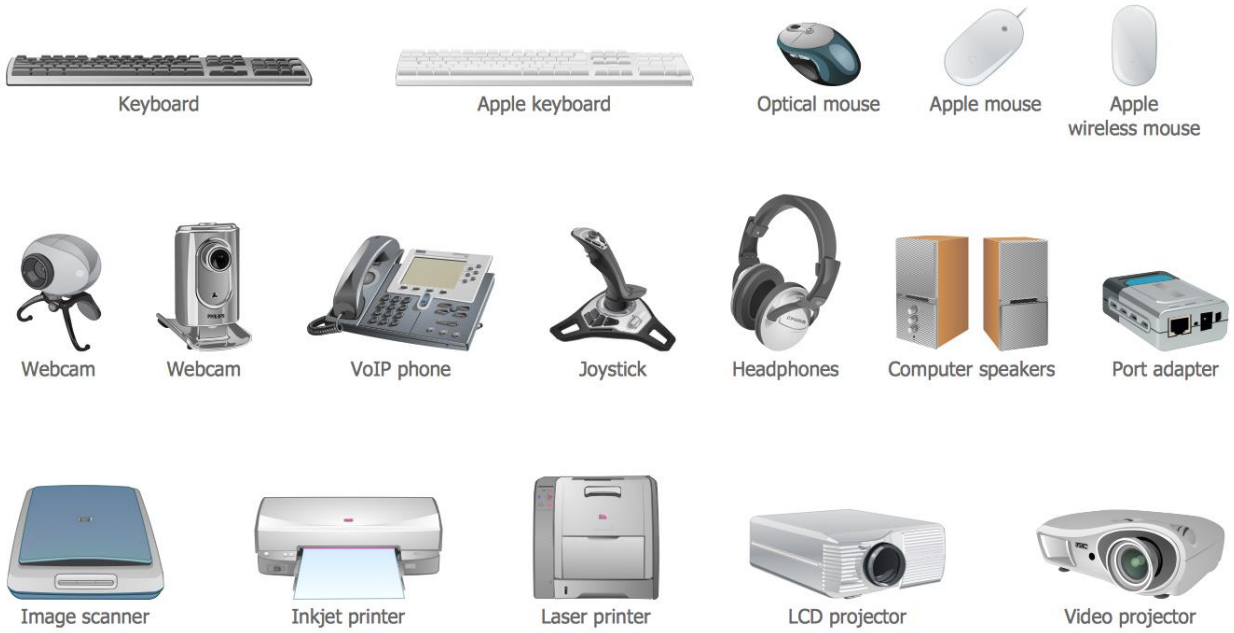
Intro to basic IT terms & concepts

Computer hardware (component): physical parts that are required for a computer to function.



Intro to basic IT terms & concepts

Computer Peripheral: any auxiliary device that connects to and works with the computer to put information into it or get information out of it. It provides a computer an additional functionality.



Intro to basic IT terms & concepts

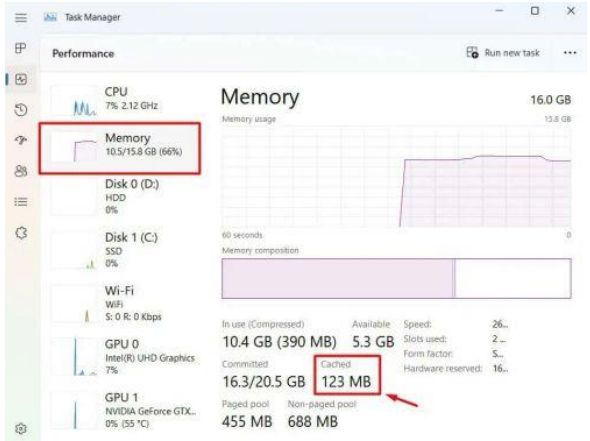
OSI (Open Systems Interconnection) Model: a conceptual framework that divides network communications functions into seven layers. It provides a standardized architecture for designing and implementing network protocols, enabling interoperability between different products and software.

Layer	Example devices, functions, protocols
7. Application	End user apps, HTTP, TelNet, FTP, DNS
6. Presentation	Syntax layer, data encryption, decryption
5. Session	App session setup, coordination, termination
4. Transport	End-to-end data transmission via TCP, UDP
3. Network	Packet forwarding, routing, subnet usage
2. Data link	Node-to-node data transfer, error correction
1. Physical	Physical structure, such as cables, hubs

Intro to basic IT terms & concepts

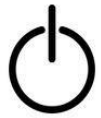
CPU (Central Processing Unit): The main component of a computer that executes instructions and performs calculations.

Cache: A temporary storage area for frequently accessed data.



Intro to basic IT terms & concepts

Binary code: A system of representing text or computer processor instructions using the binary number system: 1 and 0.

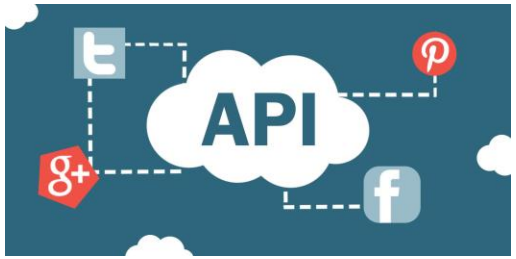


BCP (Business Continuity Plan): A plan that outlines how an organization will continue operating during and after a disaster or disruption.

Failover: automatic switching to a redundant or standby computer server, system, hardware component or network upon the failure or abnormal termination of the previously active application, server, system, hardware component, or network in a computer network.

Intro to basic IT terms & concepts

API (Application Programming Interface): A set of rules and protocols that allows different software applications to communicate with each other.



Cloud computing: The delivery of computing services over the internet.

Intro to basic IT terms & concepts

Software: collection of programs and data that enables a computer to function by managing hardware and facilitating tasks.

Applications: specific packages designed for end users, executing tasks directly based on user input and interaction.

Intro to basic IT terms & concepts

Front-end development: everything that users interact with directly on a website or application. This includes the design, layout, and interactive elements.

Back-end development: the server side of a website or application that involves managing databases, server logic, and ensuring that everything operates as intended behind the scenes. Back-end developers use languages like Python, Java, PHP, and Node.js to build and maintain the server-side logic.

Framework: a structure that provides a base for application development processes based on programming languages such as Angular and React for JavaScript. It improves understanding, testing , debugging, and redundancy of code

Intro to basic IT terms & concepts

UX/UI (User Experience/User Interface): The process of creating products, systems, or services that provide meaningful experiences for users. Also involves the process of creating actual interfaces with which users engage, including visual elements, interactive components, and typography