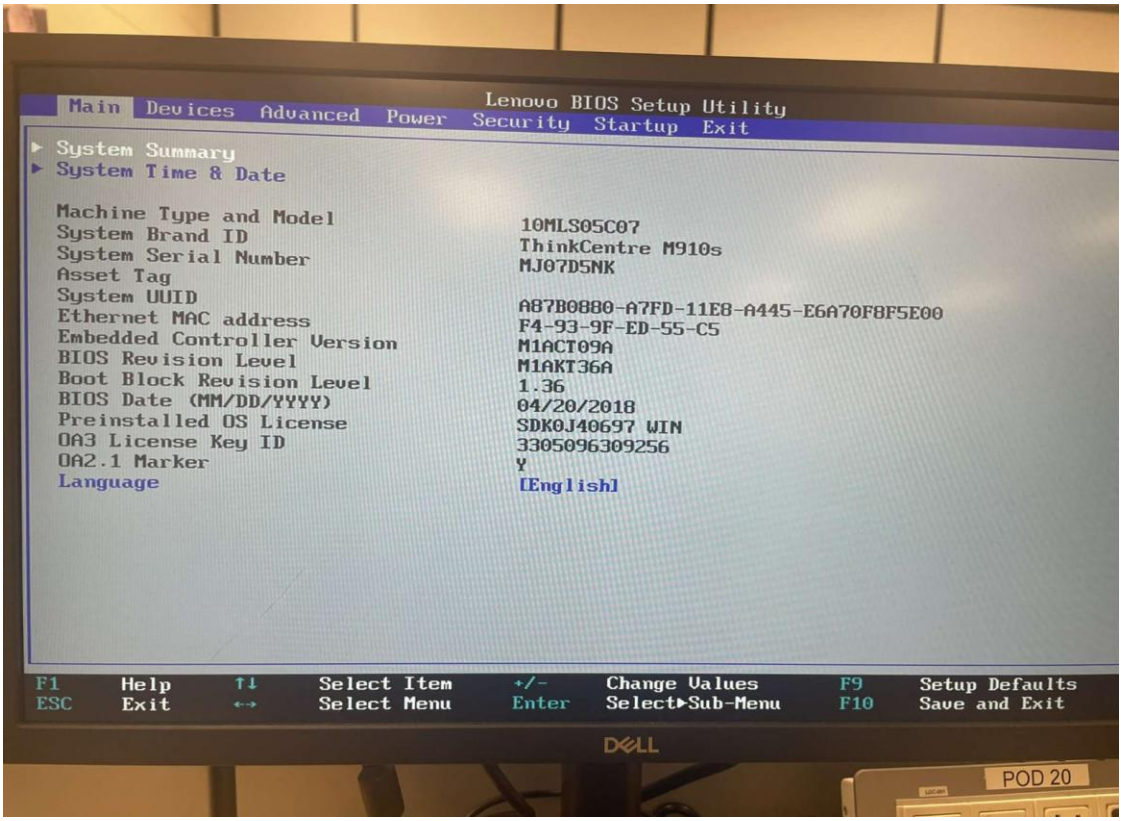
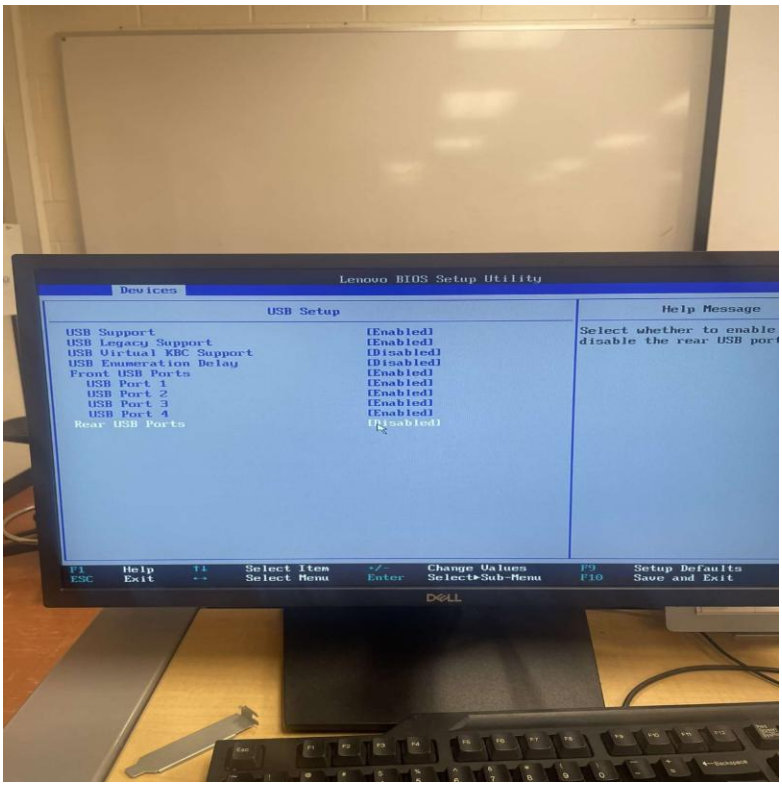
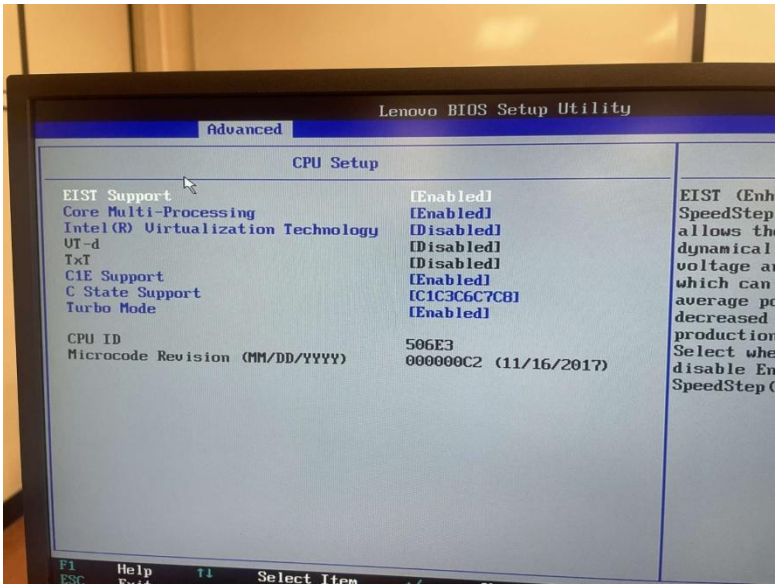
1. Click f1 continuously until you arrive at the BIOS system summary



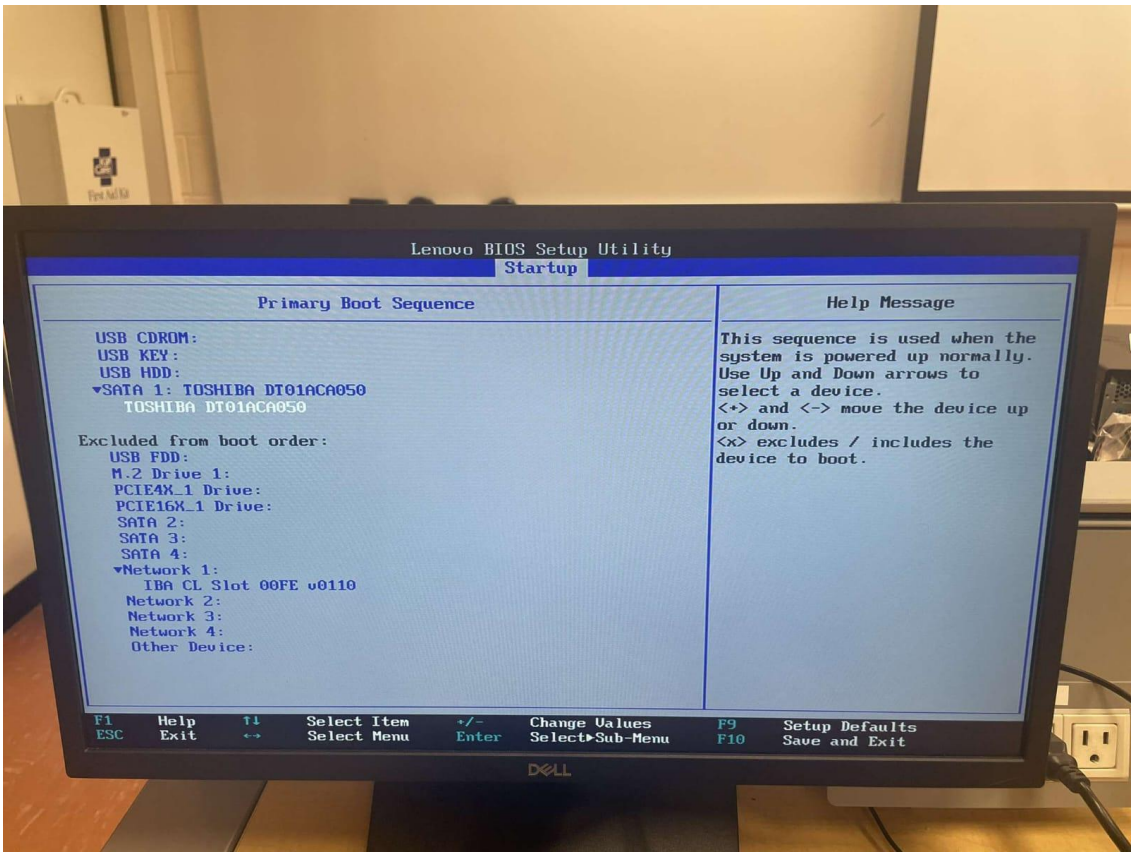
2. To disable Rear USB ports go to USB setup.



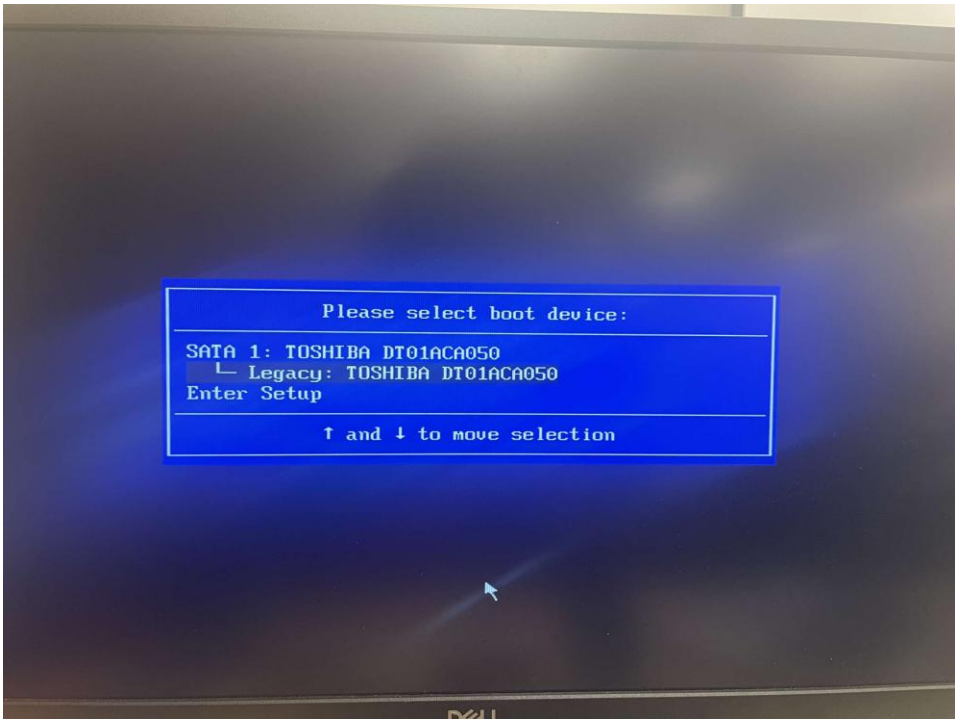
3. To disable Intel Virtualization Technology go to CPU Setup



4. Change the Primary boot order on your PC so that the first boot device is saved as USB flash drive and also Change the Primary boot order so that the second boot device is the USB CDROM/DVD Drive and Change the Primary boot order so that the third boot device is your main Hard Drive.

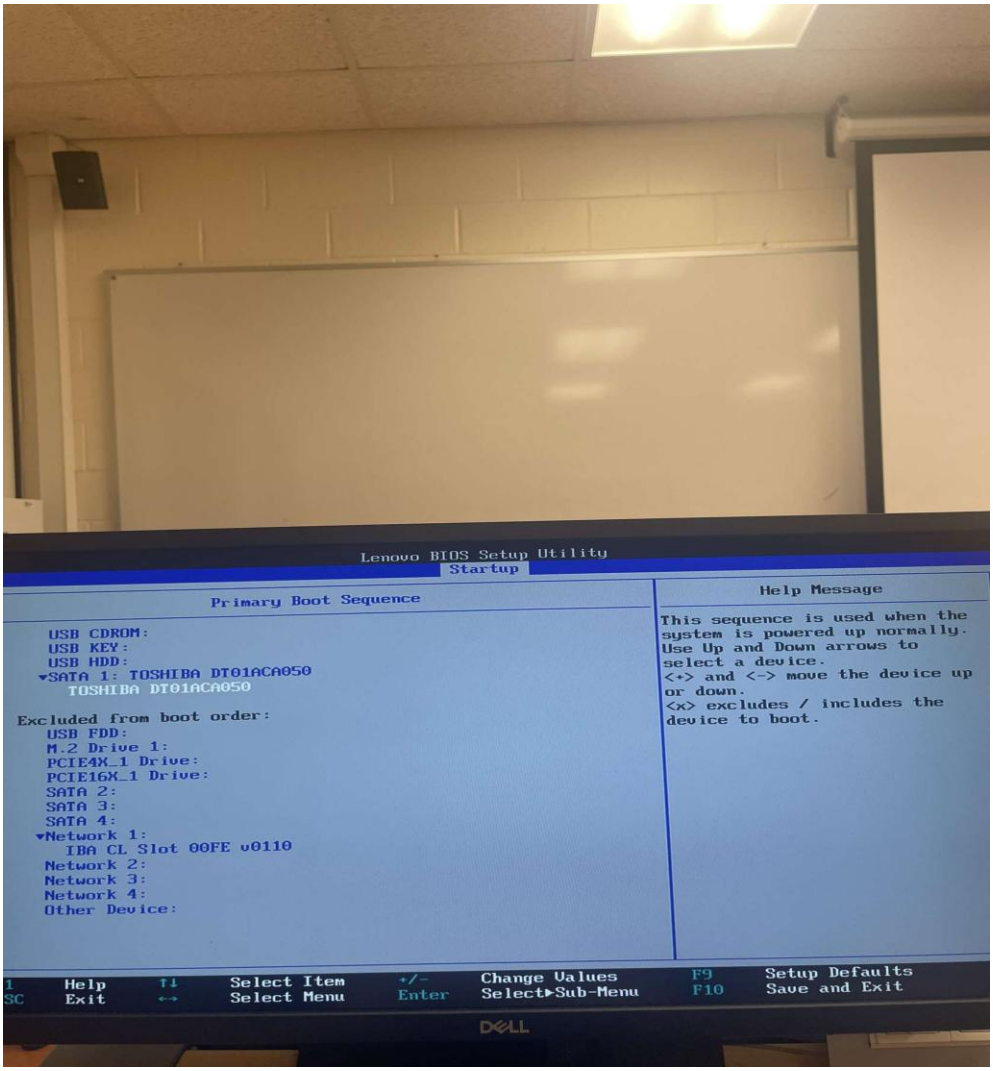


5. When the computer restarts, interrupt the normal startup (without going into BIOS). Click F12 to choose a temporary startup device.



6. When the computer restarts click f12 to interupt the normal start up

7. Go to the Primary Boot Sequence screen, which shows your modified boot order. Save the settings and turn off the PC.



REFLECTION

The BIOS and motherboard lab was a good experience that built my understanding of computer hardware.

I learned how BIOS settings influence system functionality, including boot order and power management. One of the most interesting aspects was navigating the BIOS interface and modifying configurations to optimize system performance identifying and understanding the various motherboard components, such as the chipset, RAM slots, and expansion ports, provided valuable hands-on knowledge.

One of the challenges I encountered was understanding the differences between UEFI(Unified Extensible Firmware Interface) and legacy BIOS settings. It required careful attention to detail to ensure I correctly adjusted the configurations without causing boot issues.

This lab provided practical skills that are necessary for troubleshooting and maintaining computer hardware.

Items	**Motherboard 1 Blue without CPU**	**Motherboard 2 Blue with CPU**	**Motherboard 3 Red/Black**
Motherboard Manufacturer/model	Gigabyte GA-81865GME-775	Intel Desktop Board DQ35JO	Gigabyte GA-Z170X-Gaming 3
CPU Socket Type (LGA, PGA)	Intel Pentium 4, D, and Core 2 Duo processors	LGA 775	LGA 1151
How many m.2 slots?	None	None	2
How many PCI slots?	3	1	2
How many PCIe x1 slots?	None	2	3
How many PCIe x4 slots?	None	None	0
How many PCIe x8 slots?	None	None	0
How many PCIe x16 slots?	1 (green Slot)	1	2
How many SATA connectors?	2	6	-- SKIP --
List all power connectors (ie. power going into the motherboard from the PSU).	20-pin ATX main power 4-pin CPU power	24-pin ATX main power 4-pin CPU power	24-pin ATX main power connector
Form factor	ATX	BTX	ATX
List ALL external ports embedded on the motherboard	PS/2 (Keyboard & Mouse) Parallel port VGA USB Ethernet Audio jacks	VGA USB Ethernet Audio jacks	PS/2 Keyboard/mouse port DVI-D port HDMI port Displayport Optical S/PDIF Out connector 5 audio jacks

			USB Type-C port USB 3.1 Type-A port 4 USB 3.0 ports RJ-45 Ethernet port

The Gigabyte GA-8IPE1000 Pro is definitely the "weakest" in terms of expandability. Here's why:

- Older Technology: This motherboard is like an old car – it uses older technology like DDR RAM, AGP slots (for graphics cards), and IDE connectors (for storage drives). Newer parts are not compatible with it, so it's hard to find upgrades. It's like trying to put a Blu-ray player in a car that only has a cassette tape deck!

- Limited Slots: It has fewer slots for expansion cards compared to the other motherboards. This means you can't add as many extra features like a super-fast network card, a fancy sound card, or extra USB ports. It's like having a phone with limited app storage – you can't add as many cool features!

2. Even though the motherboards are different ages, they all share some important things:

- CPU Socket: All motherboards have a special socket for the brain of the computer – the CPU (Central Processing Unit). It's like the parking spot for the computer's most important part!

- RAM Slots: All motherboards have slots for RAM (Random Access Memory). RAM is like the computer's short-term memory, and all computers need it to run programs. It's like having a desk to keep your homework while you're working on it!

- Power Connectors: All motherboards need a way to get power from the power supply. They all have special connectors for this.