FIT1047

SUPPLEMENTARY WORKSHEET -02

WEEK 06

1. Explain two restrictions for a PC during firmware (BIOS/UEFI) configurations, when compared to a PC running a full operating system.

   access but running on the firmware might not allow the user access the network completely.

   On the other hand, with OS, it allows user to connect with input/output devices such as mouse, keyboard, etc. But running purely on firmware does not allow

2. Briefly explain the concept of a process, including the states it can be in.

   A process is the execution of a program. It takes an instruction from the user and execute upon that instruction. A process can be one of these three states: ready, running, blocked. In the ready state, a process is ready for execution, but is yet to be executed. After the OS schedules all the process in order, it switches to running state.

   In the running state, the process is being executed by the CPU. During this state, two things can happen: the process de-schedules and return back to ready state or the process requests for some I/O to happen. When the process requests I/O, it will be transferred to the blocked state, this is because the I/O might take a long time to happen.

   In the blocked state, the process waits for the I/O to happen. Once the I/O is executed, it returns back to the ready state, where it will be scheduled again.

3. What is the first thing the BOIS will do after a successful POST?

   After POST, BIOS will initialise the video card to show initial messages on the screen

4. What is the last thing the BOIS will do?

   It will execute the boot sector through a bootable drive or through the Master Boot Record (MBR) on hard disk. Once the boot sector is executed, it will load the operating system from the kernel, then load various drivers and lastly load the graphical user interface (GUI). At this stage, the computer is ready to use.

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5. List two difference between BOIS and UEFI.

   BIOS allows user to work up to 2.2 terabytes of hard disks, while UEFI allows user to address up to 9.4 zettabytes of hard disks.
   BIOS has slower hardware initialisation while UEFI has faster hardware initialisation.
   BIOS has lower security while UEFI has higher security before starting the OS.
   BIOS might not allow network access before starting the OS but UEFI allow user to access the network during booting process.

6. During the POST, why no message will be displayed on the screen when the CPU is disconnected?

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