

TUTORIAL ONE

Review on Computer System Operation

1. Review the following concepts on Computer System Operation, and explain how they are related to Operating Systems.
 - a) Computer Organization
 - b) Interrupts
 - c) I/O Structure: Interrupt-Driven Data Transfer, Direct Memory Access (DMA) Data Transfer

OS Structures and Concepts

2. Indicate whether the following statements are true or false. Justify your answers.
 - a) All I/O instructions are privileged instructions. True.
 - b) Given a base register value of 0x1000 and a limit register value of 0x1000, access to memory location 0x1FFF will generate a trap. False. Last location it can access is $0x1000 + 0x1000 - 0x1$
 - c) Popular operating systems for personal computer use (such as Windows and Linux) are real-time systems. False. Time-share systems
 - d) A system call always generates a trap. True
3. Distinguish between multiprogramming and multiprocessing. What were the key motivations for the development of each?

Multi-programming - one cpu, multiple programs

Multi-processing - processing with multiple CPUs