Course Name: A Level (1ˢᵗ Sem)   **Subject: CO**

Topic: I/O Organization   **Date: 08-06-20**

Interrupt Types: Based on the causes of origin, the following categorization has been made for Interrupts-

1. External Interrupts
2. Internal Interrupts
3. Software Interrupts

External Interrupts: The interrupts caused by some I/O devices are called External Interrupts. There interrupts include many things together in handling like- IEN, FGI, FGO R etc.

Internal Interrupts: There interrupts are basically very unusual or unexpected events that may occur during the normal processing. These unusual events may include a division by zero, an overflow or an underflow.
Handling of these interrupts is very difficult and hence these interrupt are called TRAP.

Software Interrupts: A Software interrupt is a kind of system call or subroutine. These interrupts occur when the CPU branches the control for a subroutine which is just a part of an even bigger routine.
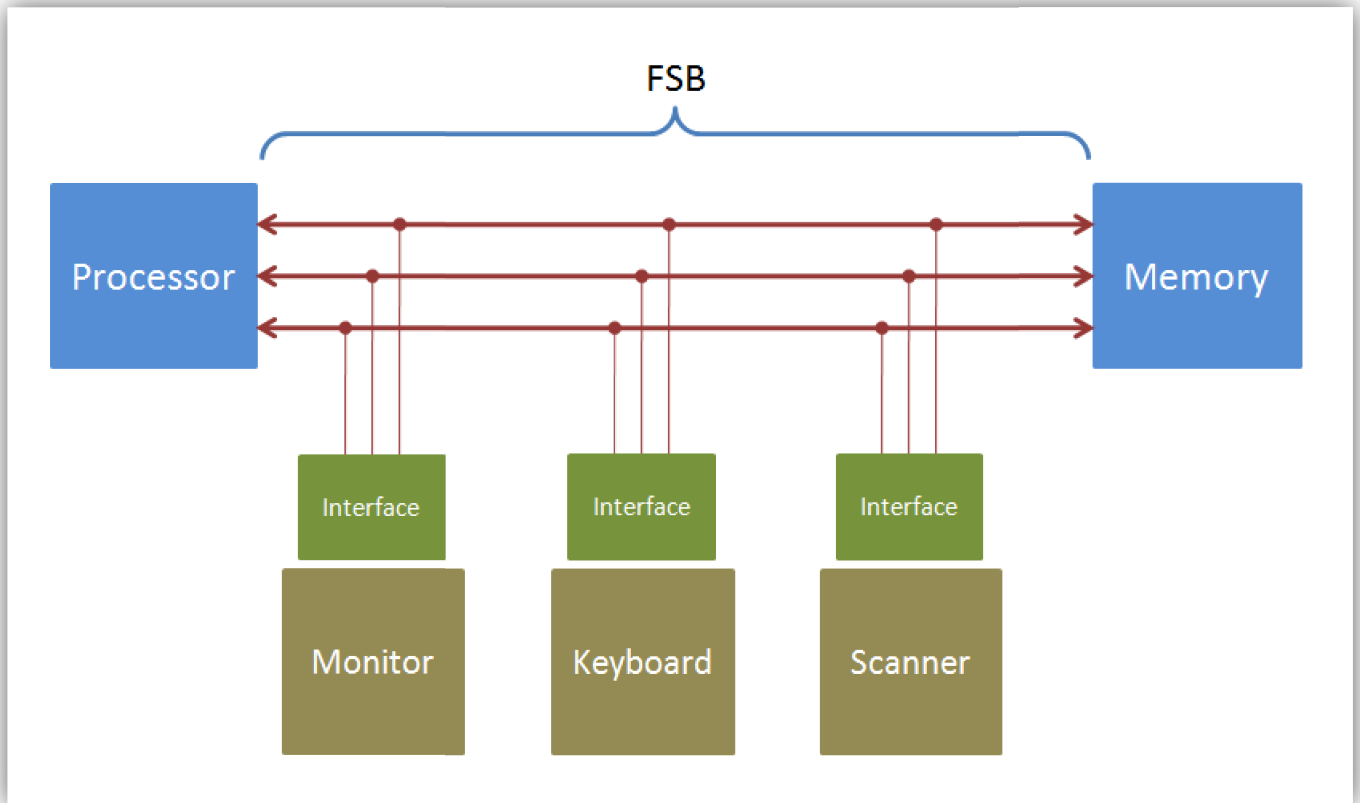
Interfaces: Interfaces are a program running on the side of device or peripheral to make compatibility between the device and the machine. This compatibility can be achieved by implementing some internal protocols to interpret the data and instruction for the device.

A sending device uses its own interface to understand the format for sending. Similarly the receiving machine uses its own interface to understand the format for receiving.

In every machine, an FSB (Front Side Bus) works in between the memory and processor which includes there important lines:

1. Data Line
2. Address Line
3. Control Line

Every device connects to all three lines thus becoming truly a part of this communication. The diagram given below illustrates the theory-

Assignment:

1. Differentiate between External and Internal Interrupts.
2. Briefly describe interfaces.