MAIOT THEORY ASSIGNMENT

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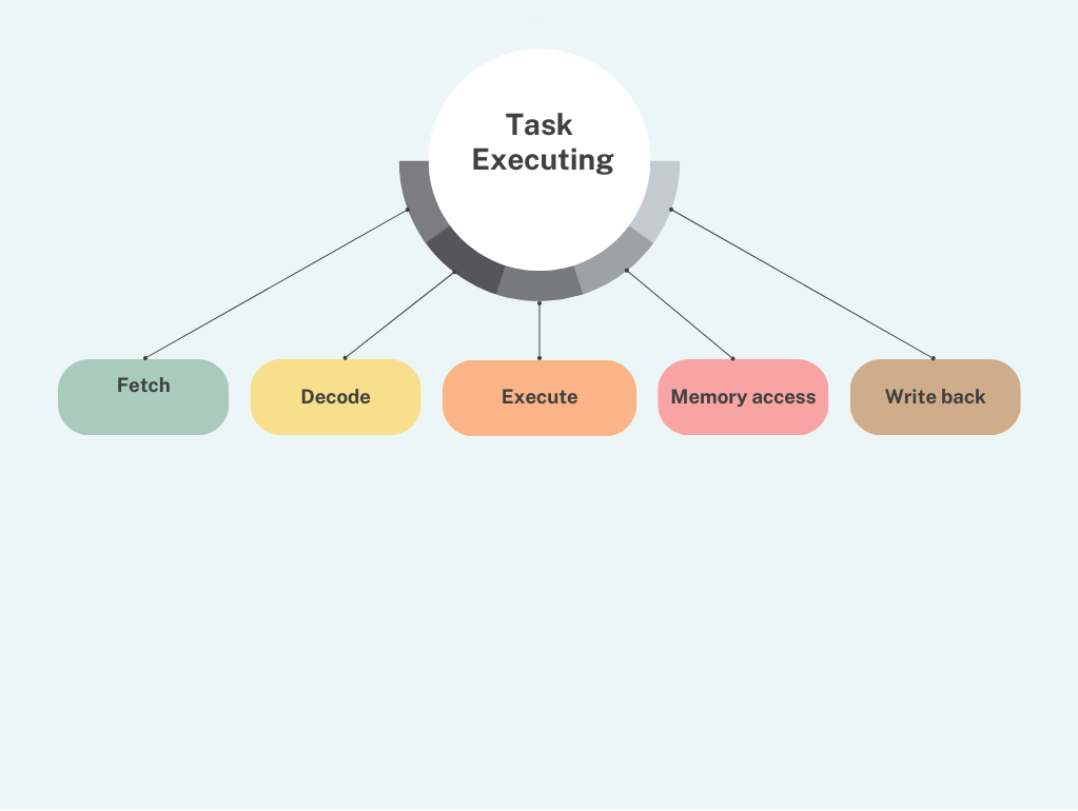
FAQ

(a) Prepare a digital poster representing task executing steps in detail in Pentium Processor.

(b) Explain the Interrupt Gate Descriptor descriptors in brief.

Answer (a):-



Answer (b) :-

In the context of computer systems, an Interrupt Gate Descriptor is a data structure that provides information about how to handle interrupts. Interrupts are events that occur when the normal execution flow of a program is interrupted by some external event, such as a user pressing a key on a keyboard or a device sending data to the computer. Interrupt Gate Descriptors are part of the Interrupt Descriptor Table (IDT), which is a data structure used by the operating system to manage interrupts.

An Interrupt Gate Descriptor contains the following information:

- Offset: The address of the code that will be executed when the interrupt occurs.
- Segment Selector: The selector for the code segment that contains the code to be executed.
- Type: A set of flags that specify the type of interrupt and how it should be handled.
- Privilege Level: The privilege level required to execute the interrupt handler code.
- Present bit: A flag that indicates whether the descriptor is valid and the interrupt can be handled.

The Interrupt Gate Descriptor is used by the CPU when an interrupt occurs to determine how to handle the interrupt. When an interrupt occurs, the CPU looks up the Interrupt Gate Descriptor in the IDT and uses the information in the descriptor to determine the address of the interrupt handler code and how it should be executed.

In summary, the Interrupt Gate Descriptor is an essential data structure that provides information about how to handle interrupts and is used by the operating system to manage interrupts.