## PCB:

PCB stands for Process Control Block. It is a data structure used by operating systems to represent and manage each process in the system. The PCB contains information about the current state of the process, the resources it is using, and the priority of the process.

## PCB Uses:

The PCB is used by the operating system to keep track of each process in the system. When a process is created, the operating system creates a new PCB for the process and stores it in the kernel memory. When the process is terminated, the PCB is removed from the memory.

## Some contents of the PCB:

- 1. Process state: This field indicates the current state of the process, such as running, blocked, or ready.
- 2. Program counter: This field contains the address of the next instruction to be executed by the process.
- 3. CPU registers: This field contains the values of the CPU registers for the process, such as the accumulator, stack pointer, and index registers.
- 4. Memory management information: This field contains information about the memory resources used by the process, such as the base address and limit of the process's memory space.
- 5. Process ID: This field contains a unique identifier for the process, which is used by the

operating system to manage and control the process.

6. Process priority: This field contains the priority level of the process, which is used by the operating system to determine the order in which processes are scheduled for execution.

The PCB is a crucial data structure for the efficient management of processes in an operating system. By storing all the necessary information about each process in a single location, the operating system can quickly and easily manage the execution of multiple processes in the system.

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- 65. Define process and thread. What is PCB ? Explain its various entries with their usefulness ?
- 66. Discuss advantages and disadvantages of the Buffer cache?
- 67. Explain different types of OS with examples of each?

- 68. What is an Operating System? Write down its desirable characteristics?
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- 72. What is File? What are the different File attribute and operations?
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- 74. Describe necessary conditions for deadlocks situation to arise.
- 75. What are points to be consider in file system design? Explain linked list allocation in detail?
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- 77. Consider the following page reference string:1,2,3,4,5,3,4,1,2,7,8,7,8,9,7,8,9,5,4,5.

  How many page faults would occur for the following replacement algorithm, assuming four frames:a) FIFOb) LRU
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- 79. Write the different state of a process with the help of Process state deagram?
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