

Process Control Block (PCB)

A Process Control Block is a data structure maintained by the Operating System for every process. The PCB is identified by an integer process ID (PID).

A PCB keeps all the information needed to keep track of a process as listed below in the table –

S.N.	Information & Description
1	Process State The current state of the process i.e., whether it is ready, running, waiting, or whatever.
2	Process privileges This is required to allow/disallow access to system resources.
3	Process ID Unique identification for each of the process in the operating system.
4	Pointer A pointer to parent process.
5	Program Counter Program Counter is a pointer to the address of the next instruction to be executed for this process.
6	CPU registers Various CPU registers where process need to be stored for execution for running state.
7	CPU Scheduling Information Process priority and other scheduling information which is required to schedule the process.
8	Memory management information This includes the information of page table, memory limits, Segment table depending on memory used by the operating system.
9	Accounting information This includes the amount of CPU used for process execution, time limits, execution ID etc.
10	IO status information This includes a list of I/O devices allocated to the process.