

may differ in different operating systems, and the names of these states are also not standardized.

In general, a process can have one of the following five states at a time.

#### S.N. State & Description

1  
Start

This is the initial state when a process is first started/created.

2  
Ready

The process is waiting to be assigned to a processor. Ready processes are waiting to have the processor allocated to them by the operating system so that they can run. Process may come into this state after Start state or while running it by but interrupted by the scheduler to assign CPU to some other process.

3  
Running

Once the process has been assigned to a processor by the OS scheduler, the process state is set to running and the processor executes its instructions.

4  
Waiting

Process moves into the waiting state if it needs to wait for a resource, such as waiting for user input, or waiting for a file to become available.

5  
Terminated or Exit

Once the process finishes its execution, or it is terminated by the operating system, it is moved to the terminated state where it waits to be removed from main memory.

#### Process States

##### 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