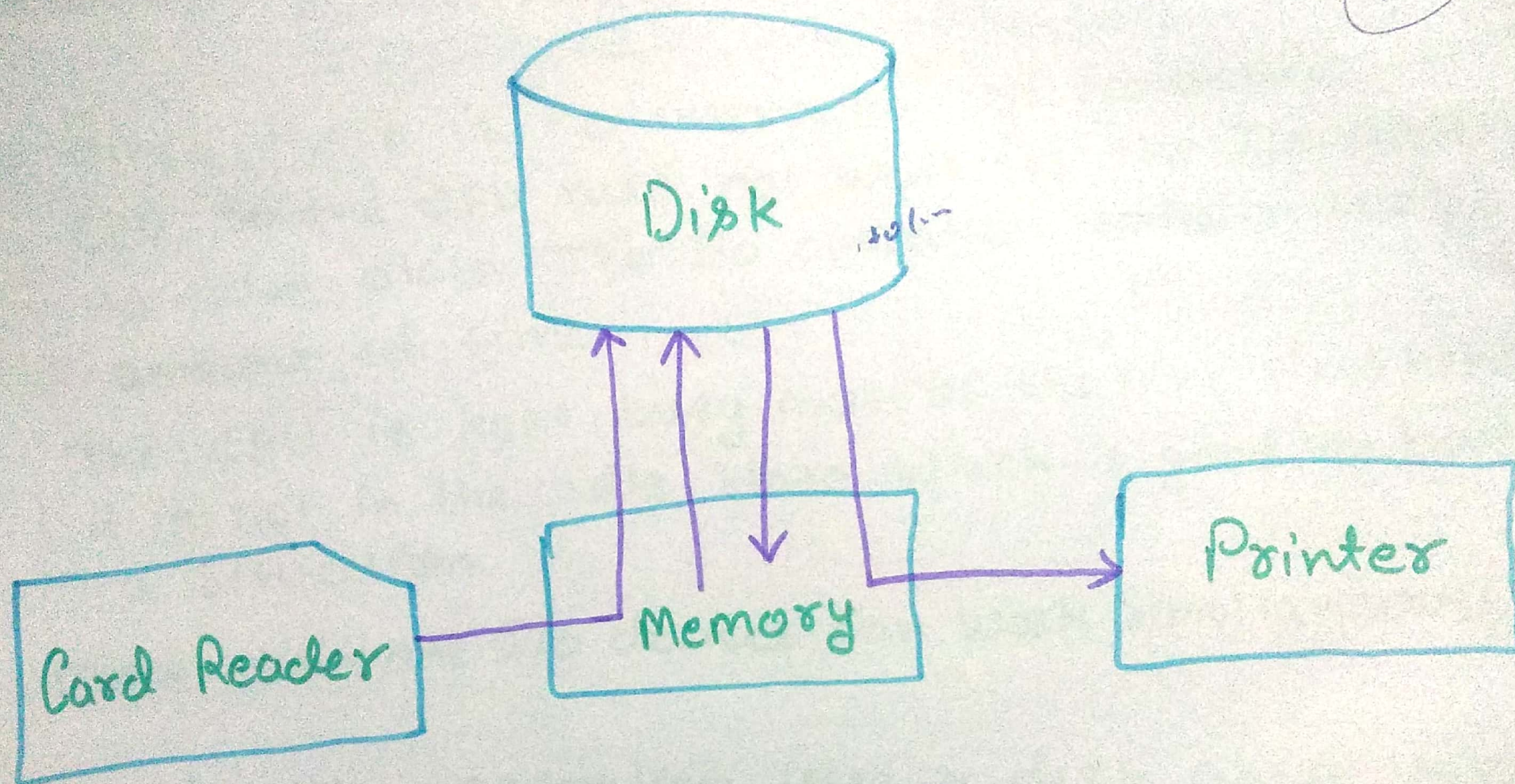


Spooling

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- ⇒ Spooling Stands for "Simultaneous Peripheral operations Online".
- ⇒ In Spooling, more than one I/O operations can be performed simultaneously. Such as at the time when the CPU is executing some process then more than one I/O operation can also be done at the same time.
- ⇒ Spooling refers to putting data of various I/O jobs in a buffer. This buffer is a special area in memory or hard disk which is accessible to I/O devices.



Spooling Process

Advantages of Spooling

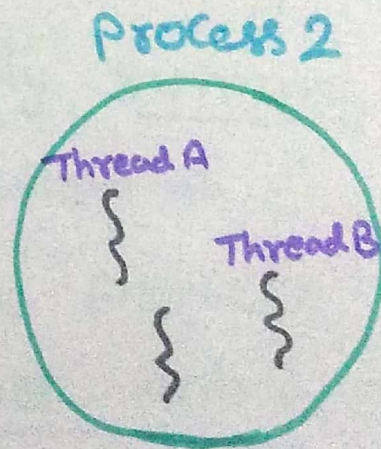
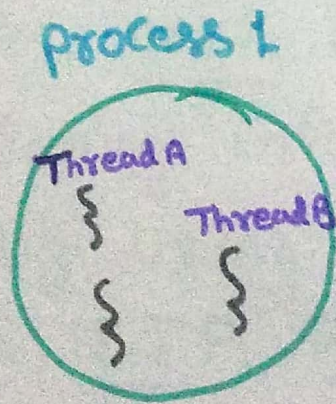
(17)

- ⇒ Since there is no interaction of I/O devices with CPU, so the CPU need not wait for the I/O operation to take place. The I/O operation take a large amount of time.
- ⇒ The CPU is kept busy most of the time and hence it is not in the idle state which is good to have a situation.
- ⇒ More than one I/O devices can work simultaneously.
- ⇒ The Spooling operation uses a disk as a very large buffer.

Introduction To Process

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- ⇒ A Process is the instance of a Computer program that is being Executed by one or many threads.
- ⇒ In the Operation System, a Process is something that is Currently under Execution. So, an active program can be called a Process.
- ⇒ For Example: → When you want to search something on web then you start a browser. So, this can be a process.



Process Attributes

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A process has various attributes associated with it. Some of the attributes are:→

- ⇒ Process ID ⇒ Every process will be given an id called Process ID to uniquely identify that process from the other processes.
- ⇒ Process State ⇒ Each and every process has some states associated with it at a particular instant of time. This is denoted by process state. It can be new, ready, running etc.
- ⇒ CPU Scheduling information ⇒ Each process is executed by using some process scheduling algorithms like FCFS, SJF, Round-Robin etc.

Process Attributes

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- ⇒ I/O information ⇒ Each process needs some I/O devices for their execution. So, the information about device allocated and device need is crucial.
- ⇒ Priority ⇒ Every process has its own priority. The process with the highest priority among the processes gets the CPU first.
- ⇒ Process Counter ⇒ Process (program) counter stores the address of the last instruction of the process on which the process was suspended.