Operating System and its functionality | Operating System – M01 P01

This is a multipart blog article series, and in this series I am going to explain you the concepts of operating system. This article series is divided into multiple modules and this is the first module which consists of 12 articles.

In this article we are going discuss about operating system and its functionalities.

Operating System: Operating system is system software and its basic functionality is that it works as an interface between user and hardware.

*Now, a question arise that what is the need of an operating system?*

This is the most common question, that why we need operating system, if we do not use operating system then to execute any operation or to perform any task we need to write a program so that hardware get to know that user want to perform this operation, but writing programs every time is not easy and not user friendly, this will also make the process to using the system more complex, to solve this problem operating system comes into play.

So, we can say that the primary goal of an operating system is to provide “convenience” to the user.

There was a time when “windows” had acquired the 95% of the market; it was the most common operating system because its main focus was to provide convenience. But as the time passed requirement increased and now we also want “Throughput” (throughput means that *number of task executed per unit time*) and in the case of throughput “Linux” performed best when directly compared to windows operating system.

Due to this at present (at the time of writing this article) the share of windows in the market is 77.74%, while the share of Linux is 1-2%, there is another popular operating system “macOS” with 17.07% of share.

1. The major functionalities of an operating system are :-
   * Resource management.
   * Process management: - We use various CPU scheduling algorithms for it.
   * Storage management: - (Hard disk) it is done with the help of file system.
   * Memory management: - RAM
   * Security.
2. Whenever operating system performs a task, it performs that task through “System Calls.”
3. Whenever we click on a file to open it operating system opens it with the help of “Open system call.”
4. Open read write are some common system calls.

This was an overview on the topic “Operating System and its functions”, on a side note remember that “Linux” is the kernel not an operating system, generally we call the operating systems like “Ubuntu”, “Kali Linux”, “CentOS” as a linux operating system because they are built on top of the linux kernel so do not get confused.

Hope this article was helpful, make sure to read the next articles of this series, in order to explore more about operating system. If you have any doubt, question or query related to this article or just want to share something, then please feel free to contact me.