Multiprogrammed and Multitasking operating system | Operating System – M01 P03

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 you will get to know about “Multiprogrammed” and “Multitasking” operating system.

1. Multiprogrammed Operating System:
   * The concept of multiprogrammed operating system came earlier than multitasking operating system.
   * This operating system try’s to take as many processes into the RAM.
   * It is generally non pre-emptive, and at the same time it tries to prevent CPU from being ideal.
   * The functionality of multiprogrammed operating system can be understand as, suppose that there is a process which wants to perform some input/output operation, in that case that process will be sent for I/O operation and in the mean time the CPU will start executing another process, and hence by this way we prevent CPU from being ideal.
   * Note that if a process does not want to perform any kind of I/O operation then CPU will first execute it completely, and this is why multiprogrammed CPU is termed as non pre-emptive.
   * The main focus of multiprogrammed operating system is to prevent CPU from being ideal.
2. Multitasking Operating System: it is also known as time sharing operating system.
   * The concept of “multitasking operating system” is simple that, it will execute a process for a particular time and if in that time the process get finished than well-n-good otherwise it will start executing other process.
   * By this approach every process get a chance to execute and the process do not have to wait for to start their execution.
   * This type of operating system is termed as “pre-emptive” (CPU is not ideal). The idealness gets decreased.
   * One more thing that makes multitasking operating system more suitable is that, along with the less idealness of the CPU the CPU becomes more responsive.
   * The main advantage of multitasking operating system over multiprogrammed operating system is that multitasking operating system more responsive then multiprogrammed operating system.
   * The main focus of multitasking operating system is to make CPU more responsive.

This was all about “multiprogrammed” and “multitasking” operating system. At present multitasking operating system is used in our mobile phones, laptops, desktops etc. and on top of that to perform operations and task the CPU uses different algorithms like “Round Robin” etc. we will see more about that in future articles.

Hope this article helped you and clear you doubts, if you have any query, question, doubt related to this article or want to share something with me, then please feel free to contact me.