| S.No. | Multiprogramming | Multitasking | Multithreading | Multiprocessing |
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| 1. | In multiprogramming, multiple programs execute at a same time on a single device. | In Multitasking, a single resource is used to process multiple tasks. | Multithreading is an extended form of multitasking. | In multiprocessing, multiple processing units are used by a single device. |
| 2. | The process resides in the main memory. | The process resides in the same CPU. | More than one thread processed on a single CPU. | The process switches from one to another CPU as multiple processing units are used. |
| 3. | It uses batch OS. The CPU is utilized completely while execution. | It is time sharing as the task assigned switches regularly. | The tasks are always further divided into sub tasks. | It carries multiple processors to execute the task. |
| 4. | The processing is slower, as a single job resides in the main memory while execution. | Multitasking follows the concept of context switching. | It allows a single process to get multiple code segments. | A large amount of work can be done in a short period of time. |