Network Programming
Task:3

1-What is the difference between parallelization, multitasking and Multithreading?

The Solution

Parallelization: Parallelization is the act of designing a computer program or system to process data in parallel. Normally, computer programs compute data serially: they solve one problem, and then the next, then the next. If a computer program or system is parallelized, it breaks a problem down into smaller pieces to be independently solved simultaneously by discrete computing resources. When optimized for this type of computation, parallelized programs can arrive at a solution much faster than programs executing processes in serial.

Multitasking: It refers to the process in which a CPU happens to execute multiple tasks at any given time. CPU switching occurs very often when multitasking between various tasks. This way, the users get to collaborate with every program together at the same time. Since it involves rapid CPU switching, it requires some time. It is because switching from one user to another might need some resources. The processes in multi-tasking, unlike multi-threading, share separate resources and memorie

Multithreading: It is a system that creates many threads out of a single process to increase the overall power and working capacity of a computer. In the process of multi-threading, we use a CPU for executing many threads out of a single process

at any given time. Also, the process of creation depends entirely on the cost. The process of multithreading, unlike multitasking, makes use of the very same resources and memory for processing the execution.

2- **Create a flow chart (sequence diagram) for the server and the client to show the execution and communication sequence.**

The solution