Parallel Computing - MCQ 1

Multiple Choice Questions on Parallel Computing

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When is it most beneficial to use multithreading in parallel computing ? *

- (●) When the program requires a high degree of parallelism and independent tasks.
- ( ) When the program primarily involves sequential tasks.
- ( ) When the program is single-threaded and doesn't require parallelism.
- ( ) When the program needs to execute a single task as quickly as possible.

Statement: In parallel computing systems, as the number of processors increases, with enough parallelism available in applications. *

- (●) True
- ( ) False

Комментарий

Great

In computer programming, what does "serial execution" refer to? *

- ( ) Running multiple tasks simultaneously on multiple processors.
- (•) Executing tasks one after another in a sequential manner on a single processor.
- ( ) Running multiple threads concurrently in a parallel fashion.
- ( ) Distributing tasks across a cluster of computers for improved performance.

Your Name *

Тимур Галеев

The time required to create a new thread in an existing process is _____ *

- (•) greater than the time required to create a new process
- ( ) less than the time required to create a new process
- ( ) equal to the time required to create a new process
- ( ) none of the mentioned

Parallel computing can be used in ___ *

- ○ Science and engineering
- ○ Database and data mining
- ○ Real time simulation of systems
- ○ Intensive calculations
- ◉ All of the above

Комментарий

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A process can be _____ *

- ◉ both single threaded and multithreaded
- ○ single threaded
- ○ none of the mentioned
- ○ multithreaded

A parallel computing system consists of multiple processor that communicate with each other using a ___. *

- ○ Network
- ○ Shared memory
- ○ None of the above
- ◉ Allocated memory

Комментарий

The correct answer is shared memory

When deciding whether to use a CPU (Central Processing Unit) or GPU (Graphics Processing Unit) for a computational task, which factor is typically the most important to consider? *

- ◉ The physical size of the CPU and GPU.
- ○ The power consumption of the CPU and GPU.
- ○ The specific algorithm and type of computation.
- ○ The manufacturer of the CPU and GPU.

In a multithreading context, what is the primary purpose of the threading start function? *

- ○ To initialize thread-local storage.
- ○ To terminate a thread's execution.
- ○ To begin the execution of a new thread.
- ◉ To synchronize access to shared resources.

In a multithreaded program, how many threads are typically alive at any given time? *

- ○ Only one thread is alive.
- ○ Two threads are alive.
- ◉ It can vary, and multiple threads can be alive simultaneously.
- ○ None of the above.

Комментарий

Multiple threads can be active simultaneously, each performing its own tasks concurrently. The number of threads can change dynamically as threads are created, executed, and terminated based on the program's requirements.