**Pipelining** and **parallel processing** are two techniques used in computing to improve system performance. The main difference lies in how tasks are split and processed.

**Pipelining** is a technique where different stages of a process are being executed simultaneously but on different parts of the task. It is like an assembly line in a factory. For example, while a processor is executing instruction 1, it can also be decoding instruction 2, and fetching instruction 3 at the same time.

On the other hand, **parallel processing** involves dividing a large problem into smaller ones, which are then solved concurrently with each other. For example, in a quad-core processor, each core can be performing a separate task at the same time, leading to a four-fold increase in speed.

Both methods significantly improve system performance. Pipelining increases the **CPU utilization** by keeping the pipeline full of instructions, and parallel processing improves performance by performing multiple tasks simultaneously.