

Time-Sharing

Definition - What does *Time-Sharing* mean?

Time-sharing is the distribution of a computing resource to many users via multiprogramming or multitasking. This was introduced in the 1960s when computers were still too expensive to be prolific, so the solution was to allow many users to make use of one computer by affording each one time-shares, a specific amount of time that a user could access the computer. This allowed many people to use a computer, which most people could not afford, without actually owning one. This is now only a historical way of using computers as there is no need to queue up users since modern computers, even the smallest ones, are able to cater to multiple users because of fast processors and multi-tasking operating systems.

Techopedia explains *Time-Sharing*

The time-sharing practice was developed out of the realization that just a single user making use of the computer was very inefficient and that a large group using it was not. The reason for this was the interaction pattern of an individual wherein the user enters large bursts of information followed by long pauses mostly due to the user thinking of his/her next move or doing something else. But if more users were to use the computer at the same time, it would mean that the pauses of the user could be filled by the activities of another user, so given a large enough user base, the process could become very efficient in that many users would be able to make use of the computer at the same time and there would be little down time for the computer. Users were able to access the same computer through different terminals and were prompted when it was their turn.

Batch processing was used to lessen the time delay between the execution of one program or user and the next, but a completely multi-user system was a completely different concept that required user states to be saved in the machine itself.

The first time-sharing project was implemented by John McCarthy in the closing months of 1957 using a modified IBM 704 and later a modified IBM 7090. The first commercially successful time-sharing system was the Dartmouth Time Sharing System.