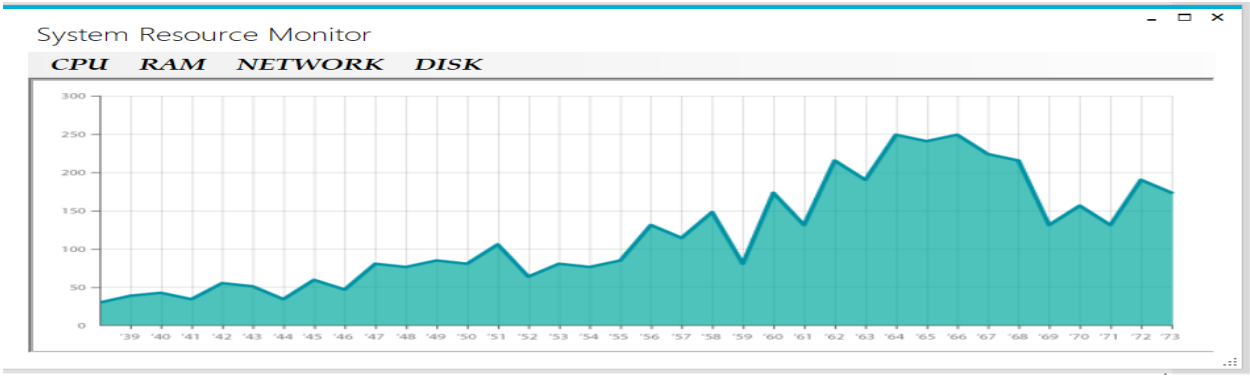
SYSTEM RESOURCE MONITOR:

*"**Resource Monitor**, a utility in Windows which display information about the use of hardware (CPU, memory, disk, and network) and software (file handles and modules) resources in real time."*



PROJECT DETAILS:

Our project displays:

- Running Processes Name by PID
- CPU Utilization Graph
- RAM Utilization Graph
- NETWORK Utilization Graph
- DISK Utilization Graph

WHAT IS PROCESS?

"A process is the instance of a computer program that is being executed by one or many threads. It contains the program code and its activity. Depending on the operating system (OS), a process may be made up of multiple threads of execution that execute instructions concurrently."

WHAT IS THREAD?

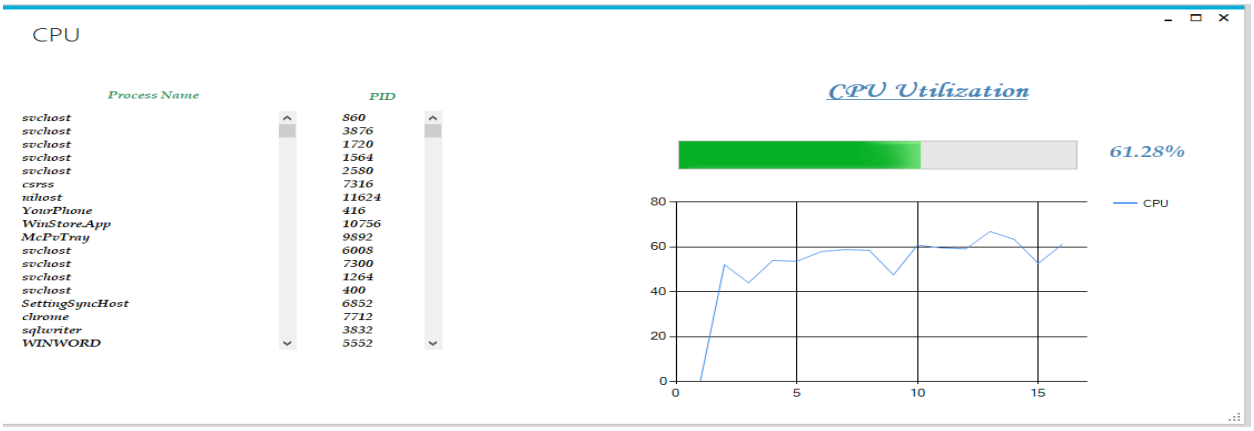
"A thread is a single sequence stream within in a process."

MULTI-THREADING:

"Multitasking is a method to allow multiple processes to share processors (CPUs) and other system resources. Each CPU (core) executes a single task at a time. However, multitasking allows each processor to switch between tasks that are being executed without having to wait for each task to finish."

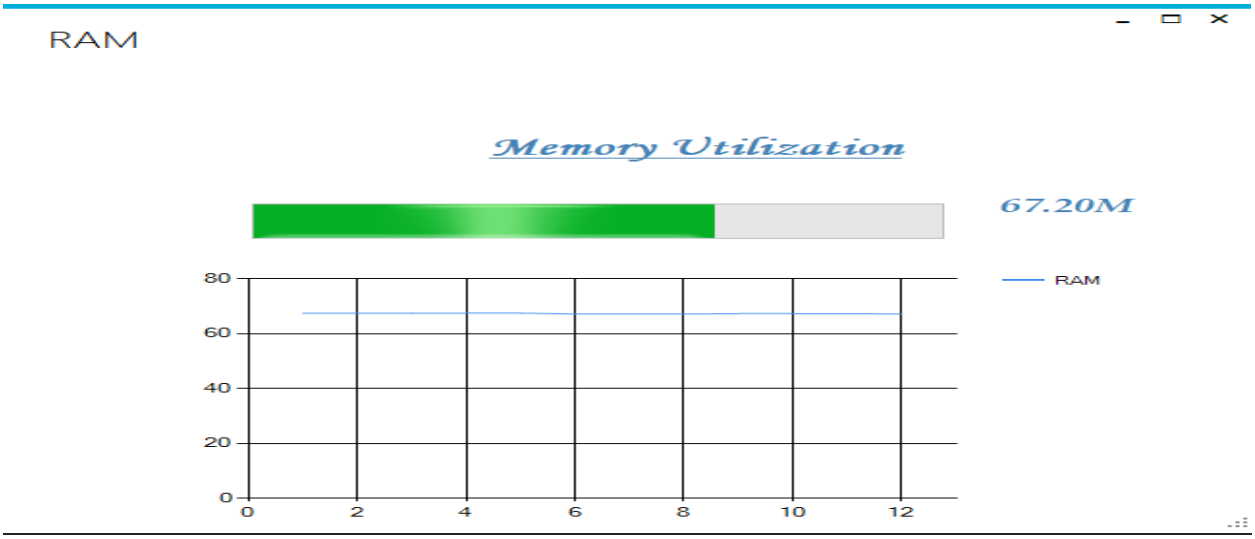
CPU UTILIZATION:

CPU utilization is the sum of work handled by a Central Processing Unit. It is also used to estimate system performance. CPU utilization can vary according to the type and amount of computing task because some tasks require heavy CPU time while others require less CPU time. Process time is another name for CPU time and is the amount of time used by a CPU for processing instruction of an operating system or a computer program. CPU time is quantified in clock ticks or seconds. CPU utilization shows the burden on a processor in terms of percentage that indicates if any changes are to be made in the system otherwise it may get exhausted of capacity.



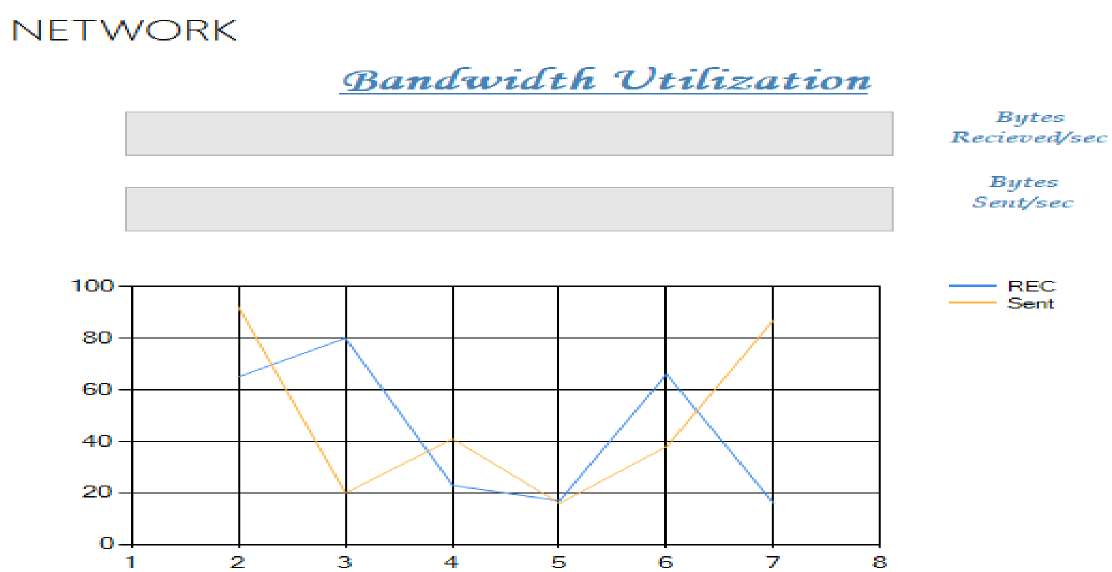
RAM UTILIZATION:

Memory is not managed as a single component, such as a CPU or disk, but as a collection of small components called *pages*.
The size of a typical page in memory can range from 1 to 8 kilobytes, depending on your operating system. A computer with 64 megabytes of memory and a page size of 2 kilobytes contains approximately 32,000 pages.



NETWORK UTILIZATION:

Network utilization is the amount of traffic on the network compared to the peak amount that the network can support.



DISK UTILIZATION:

Disk usage (DU) refers to the portion or percentage of computer storage that is currently in use. It contrasts with **disk** space or capacity, which is the total amount of space that a given **disk** is capable of storing.