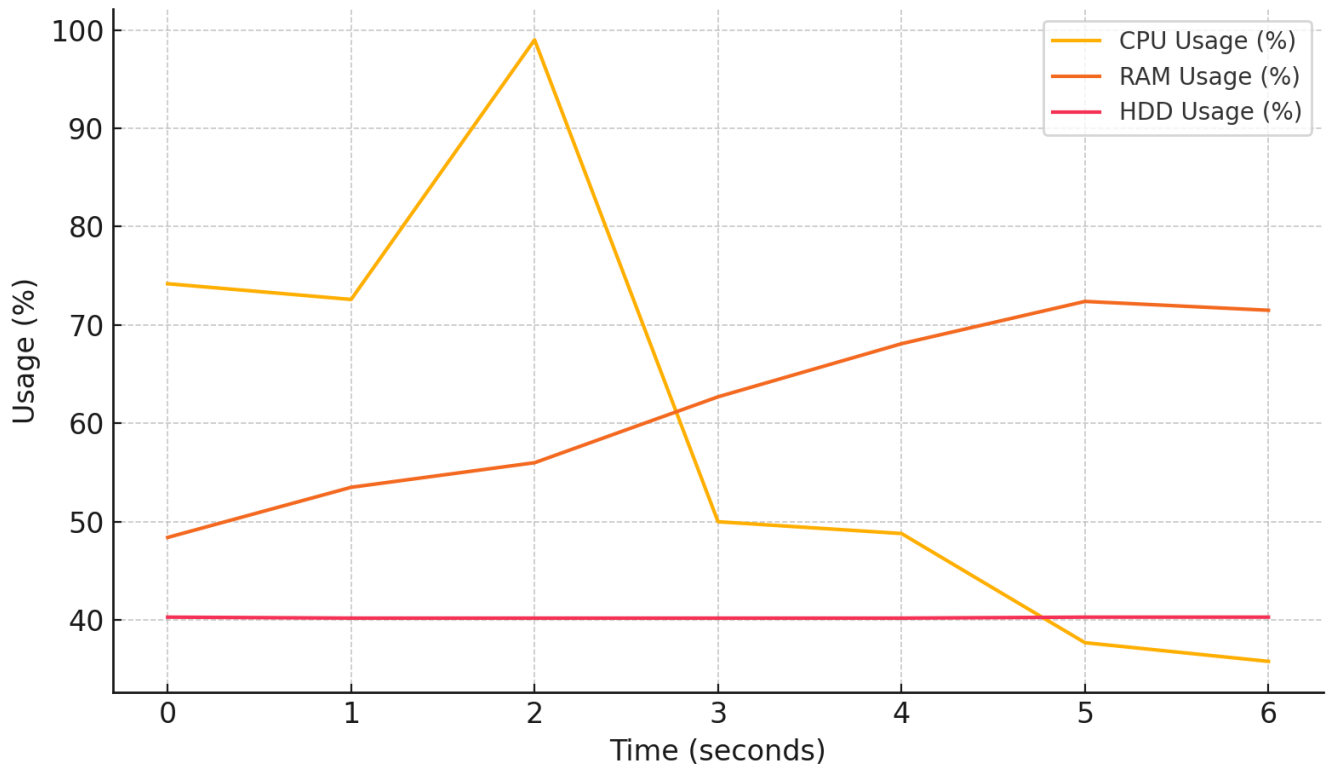
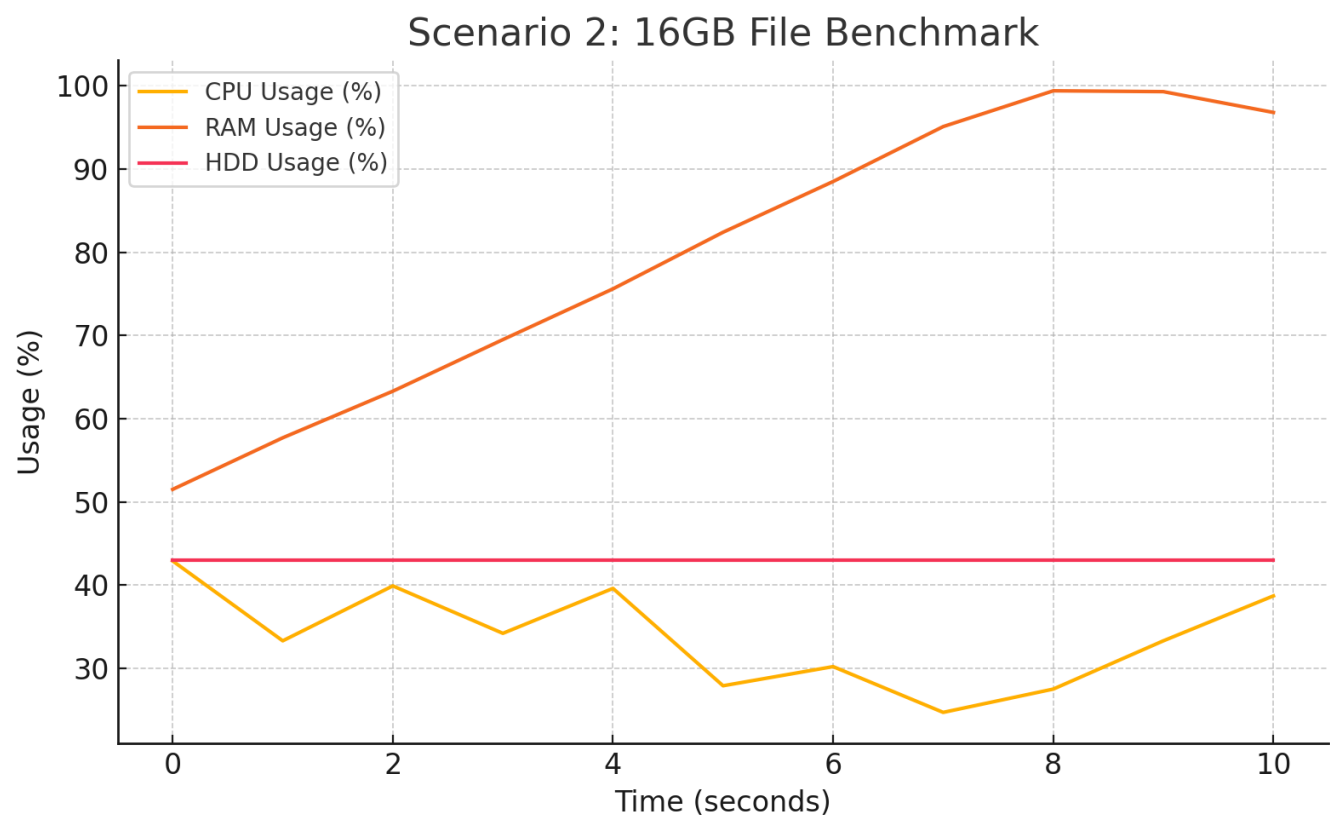


Virtual Memory Benchmark Report

Scenario 1: 4GB File Benchmark



Scenario 2: 16GB File Exceeds RAM (Triggers Paging)



Conclusions

- In Scenario 1 (4GB file), the file size fits entirely in RAM.
 - RAM usage increases steadily, but remains within the physical memory limits.
 - CPU utilization is moderate to high during write operations but drops during read.
 - HDD usage remains constant (minimal disk activity).
- In Scenario 2 (16GB file), the file size exceeds RAM capacity.
 - RAM usage grows and eventually maxes out (~99%).
 - System uses paging (swap) to manage memory.
 - CPU utilization is lower compared to the 4GB test.
 - HDD usage stays high due to intensive paging.
- Conclusion: When RAM is exceeded, read/write speeds decrease drastically and HDD becomes a major bottleneck due to paging.

System responsiveness drops and CPU is less efficiently used.