Assignment 3

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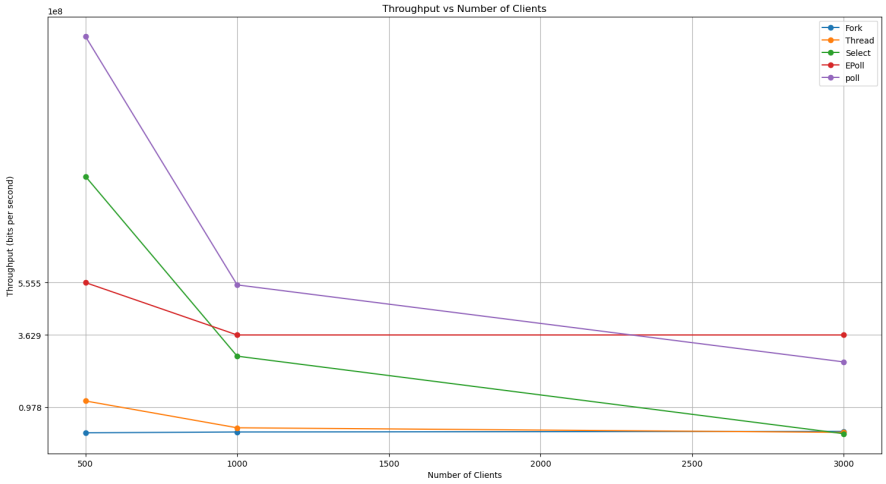
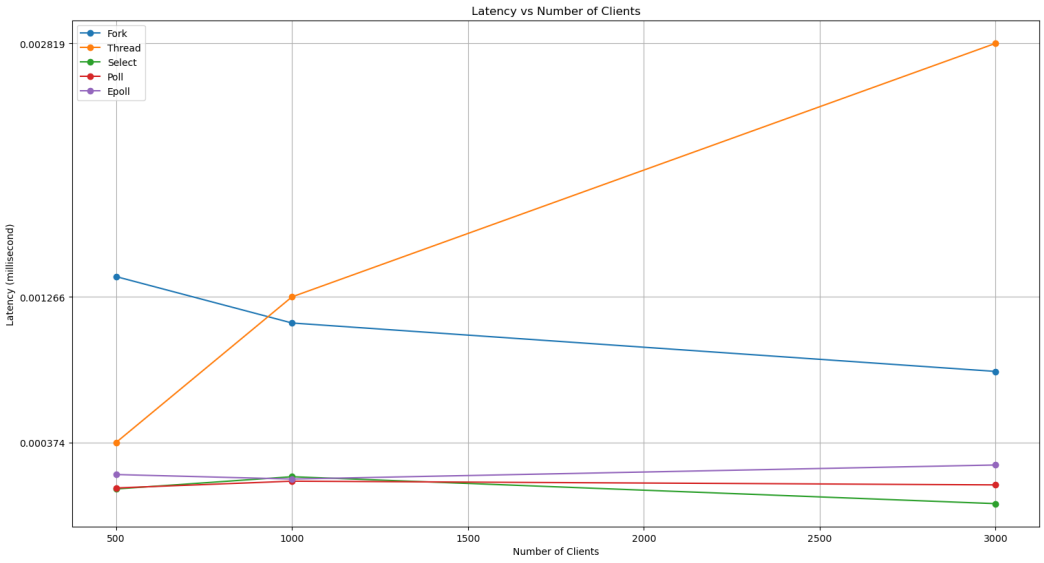
3 b) i) Throuhput Graph



Throughput of epoll is maximum and throughput of fork is minimum

3 b) ii) Latency Graph



Latency of Thread is maximum and epoll is minimum

3 c)

Fork

Clients	CPU	Memory Utilization
500	101.8	1408
1000	190.3	1408
3000	300	1408

Thread

Clients	CPU	Memory Utilization
500	97.8	5386
1000	170.1	9600
3000	300	25984

Select

Clients	CPU	Memory Utilization
500	88.1	1408
1000	97.2	1408
3000	-	-

Poll

Clients	CPU	Memory Utilization
500	71.2	1536
1000	83.7	1536
3000	159.7	1536

Epoll

Clients	CPU	Memory Utilization
500	73.6	1408
1000	88.5	1408
3000	114.7	1408

a) **CPU Utilization:-** CPU Utilization is maximum in fork because it creates a new process by duplicating the existing process which involves copying the entire address space, including the code, data, stack, and heap of the parent process and it is very resource intensive.
   But the CPU utilization of epoll is very less as compared to other mechanisms because it is continuously monitoring the file descriptors and and efficiently notifying events without duplicating resources.

b) **Memory Utilization:-** Memory utilization is maximum in threads because threads works on same memory space and it increase the process memory space.