CS-744 Project Presentation

Synchronous and Asynchronous Servers

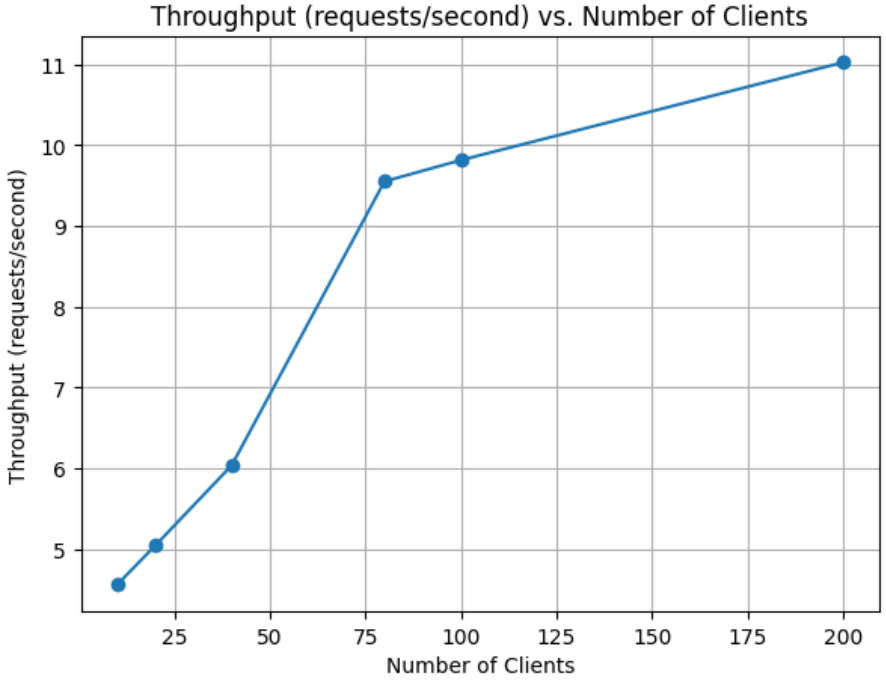
Varsha Apte

Ravi Kumar Choubey, Vedant Kalbande

23d0366@iitb.ac.in, 23m2108@iitb.ac.in

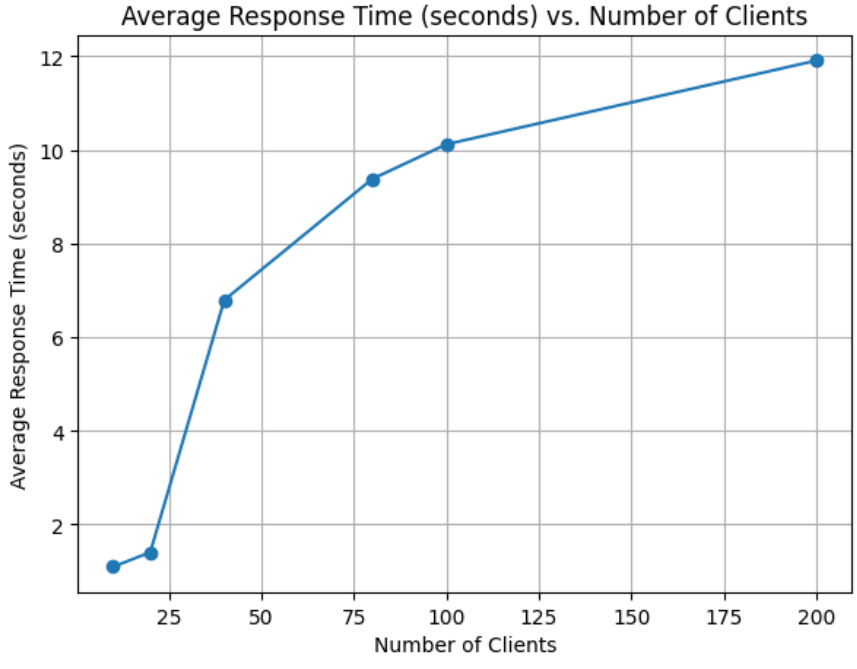
Lab07 (Synchronous -> many clients)

- **Throughput**



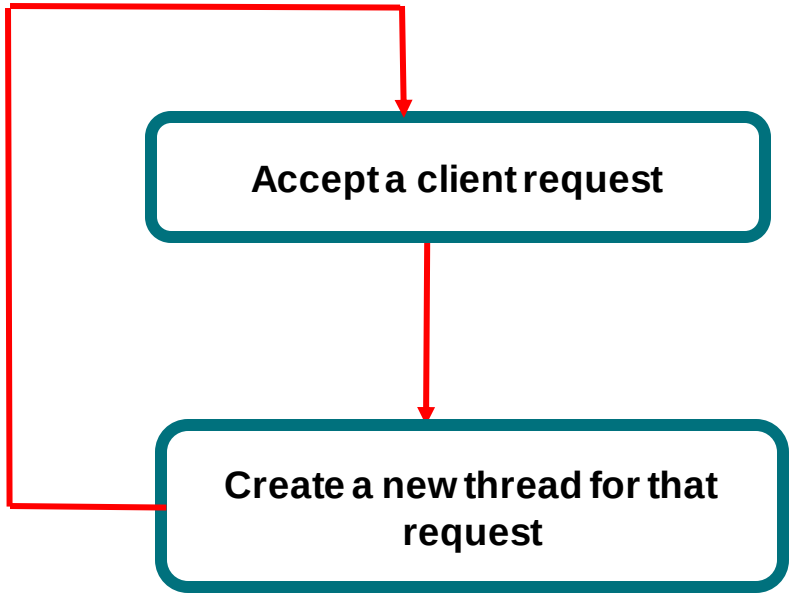
Lab07 (Synchronous -> many clients)

- **Average Response Time**



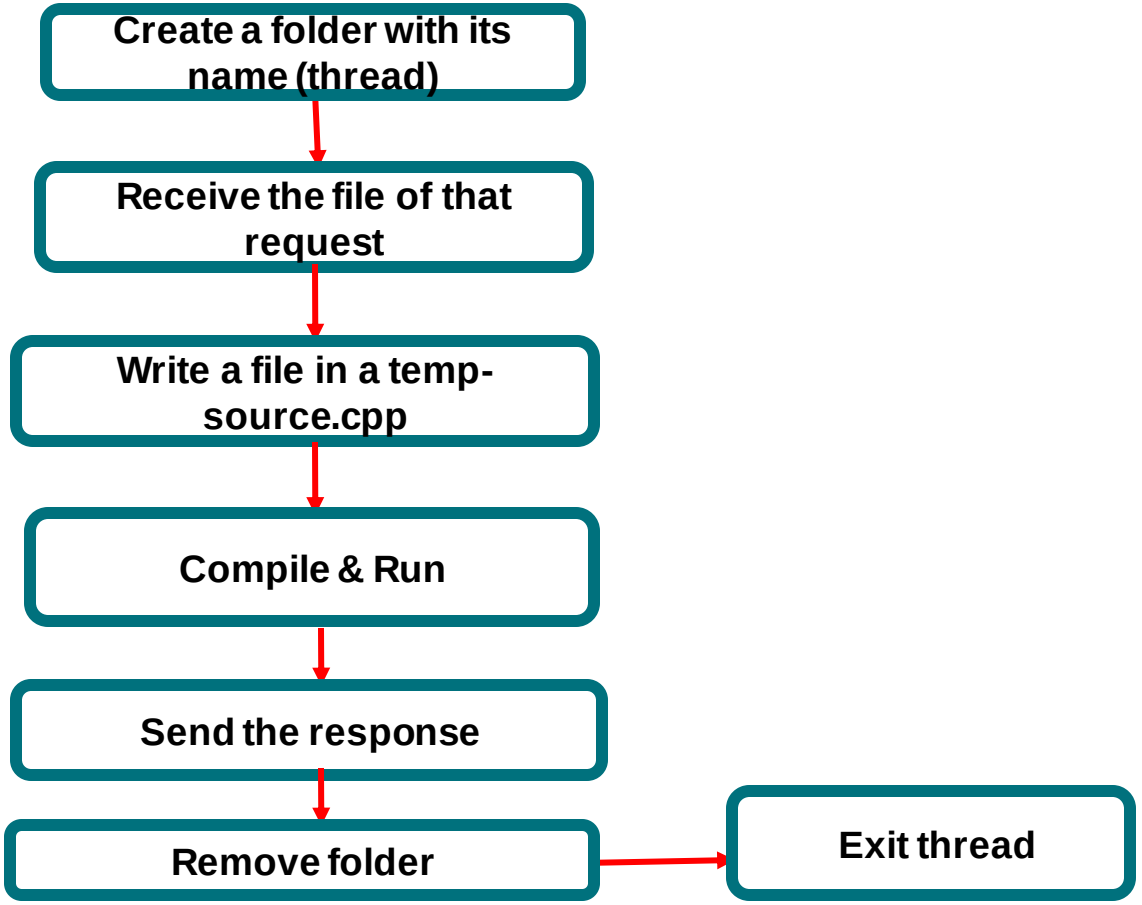
Lab08(Synchronous -> create-destroy threads)

- **Main Thread**



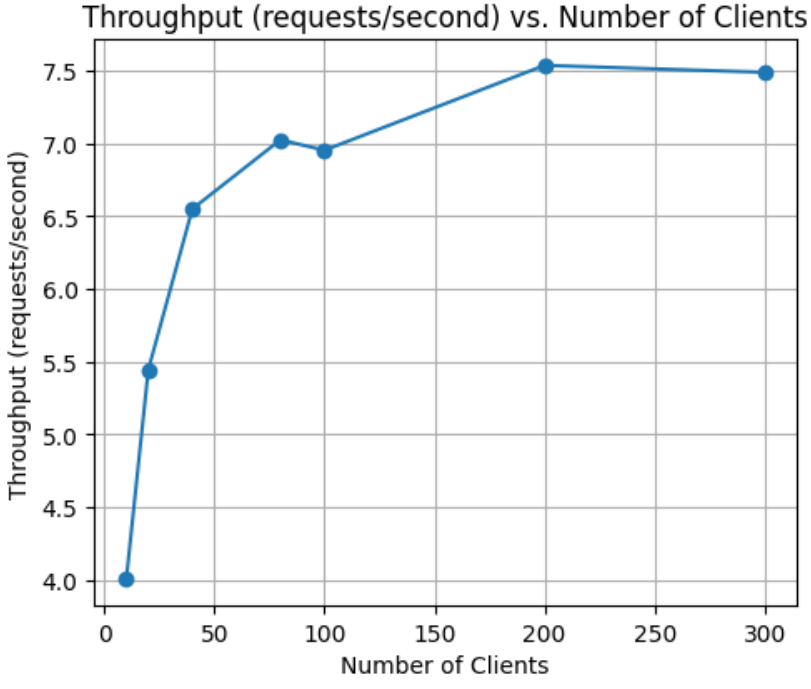
Lab08 (cont.)

- **Worker Thread**



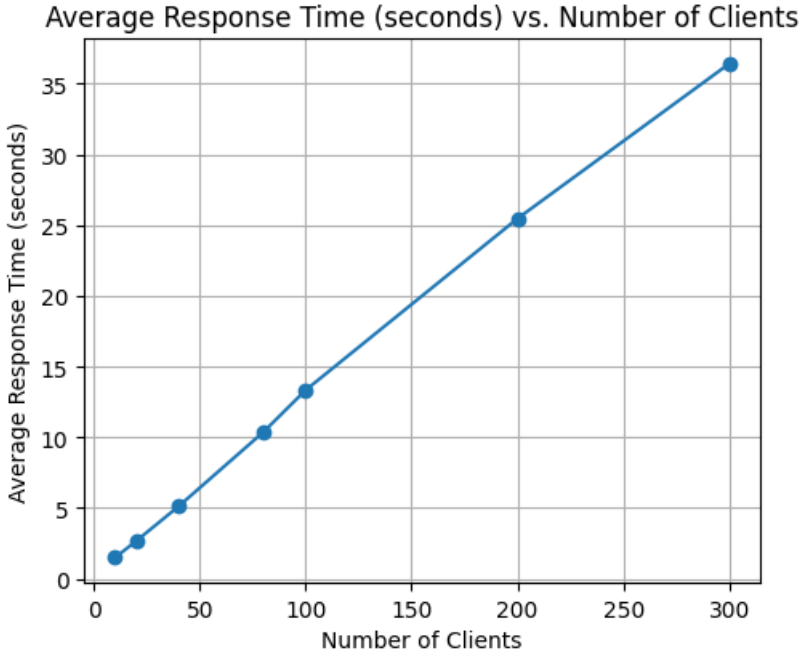
Lab08(Synchronous -> create-destroy threads)

- **Throughput**



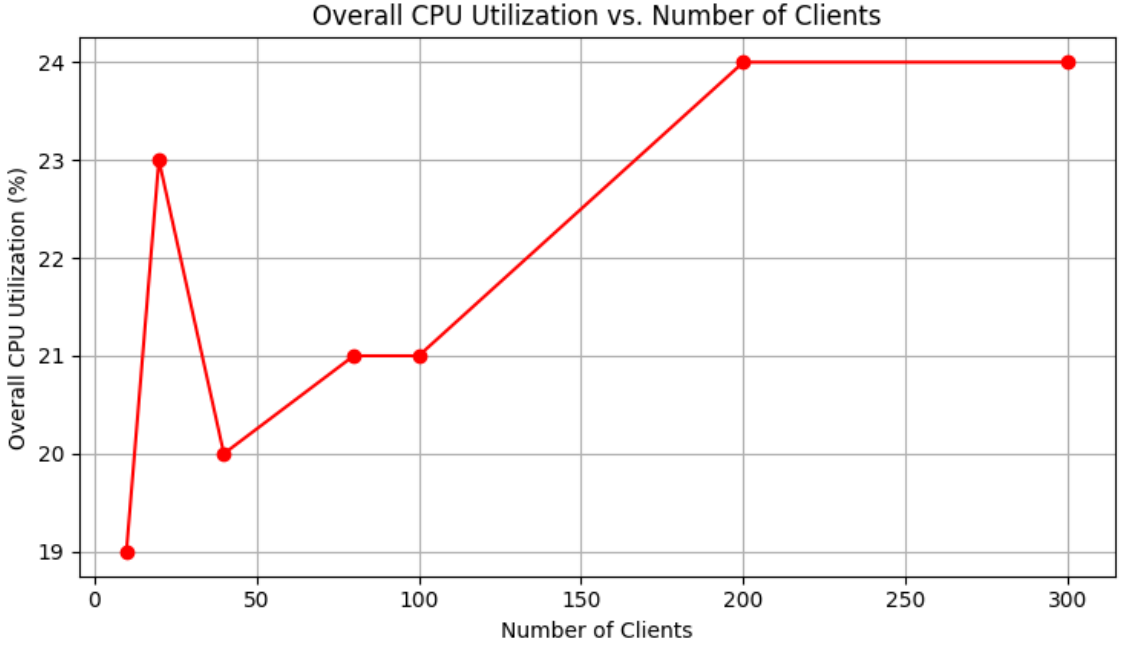
Lab08(Synchronous -> create-destroy threads)

- **Average Response Time**



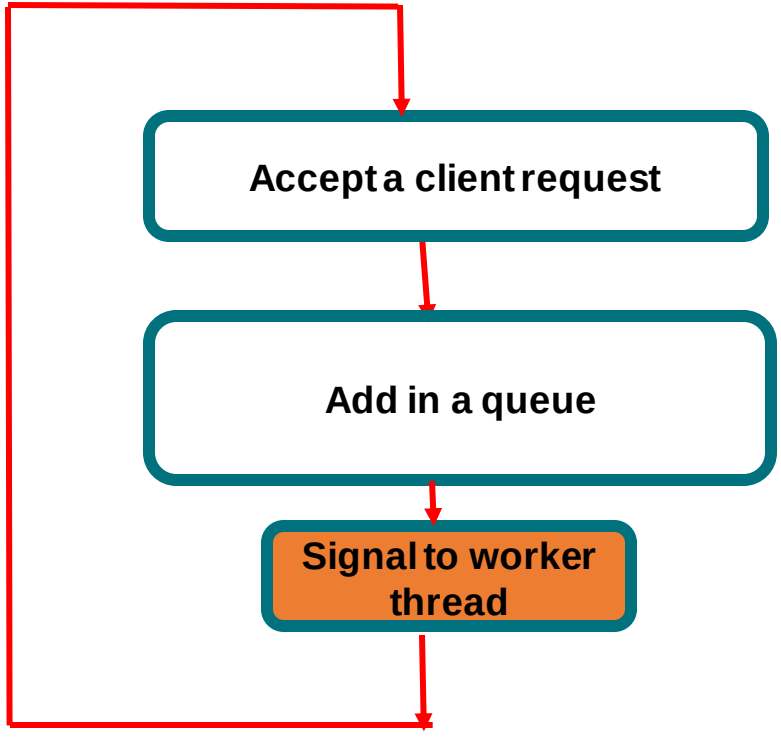
Lab08(Synchronous -> create-destroy threads)

- **Average CPU Utilization**



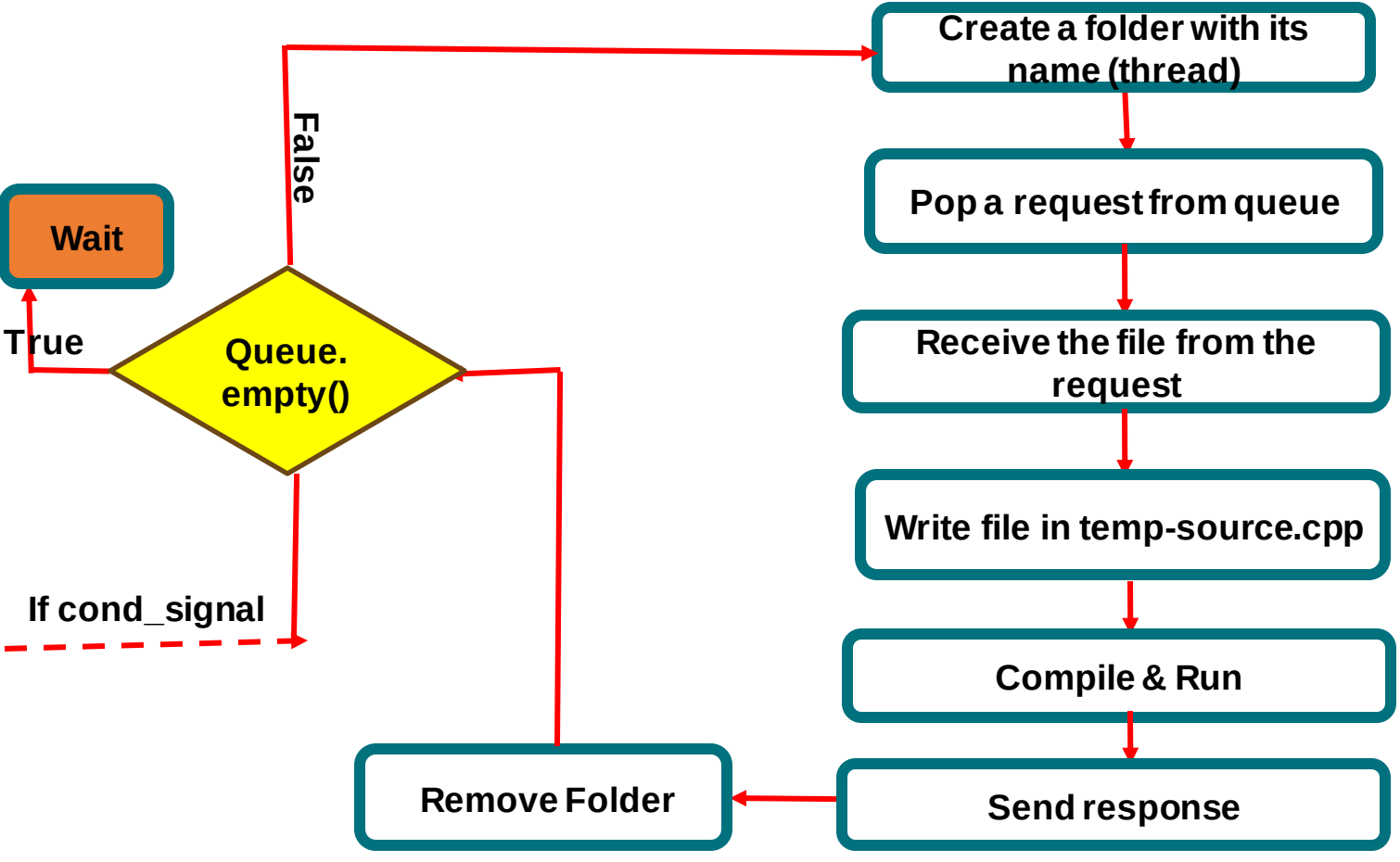
Lab09(Synchronous -> threadpool)

- **Main Thread**



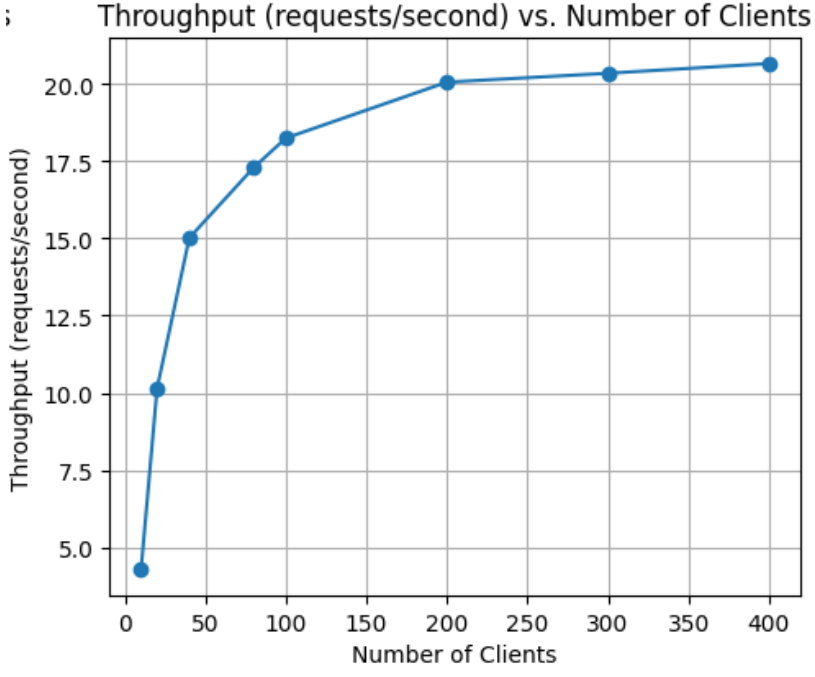
Lab09 (cont.)

- **Worker Thread**



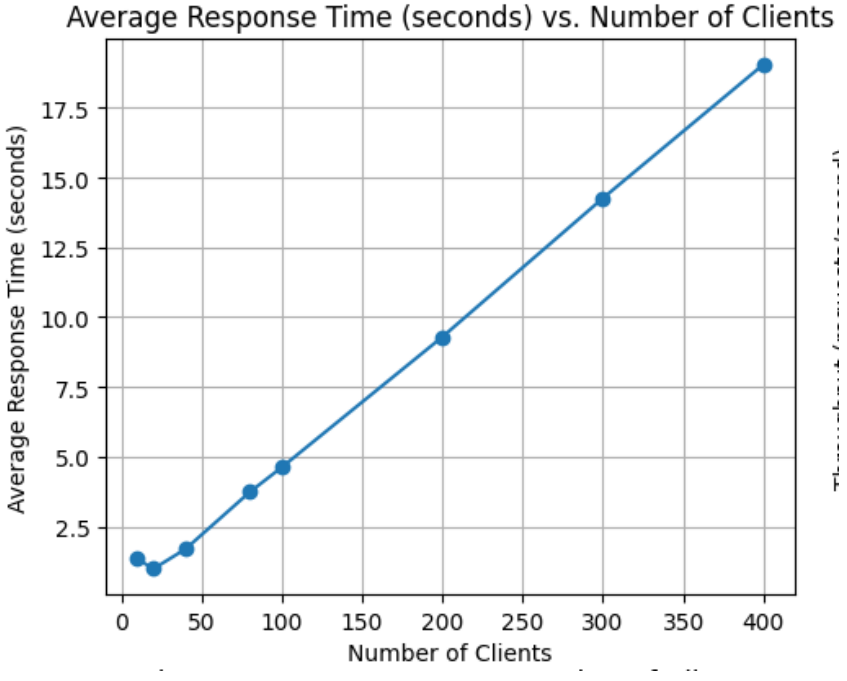
Lab09(Synchronous -> threadpool)

- **Throughput**



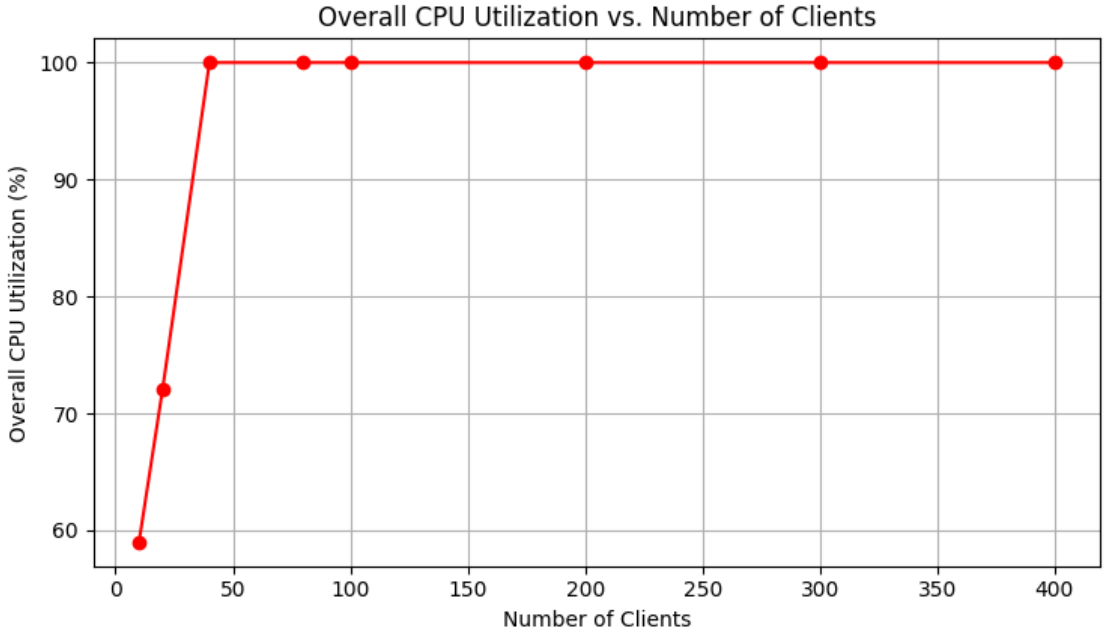
Lab09(Synchronous -> threadpool)

- **Average Response Time**



Lab09(Synchronous -> threadpool)

- **Average CPU Utilization**



Lab10 (Asynchronous)

- **Storage Design**

Data structure to store Request ID and their states.

Request ID	Flag (State)
.....	.....

There will be three types of Flags (States) :

➔ **W :** The request is waiting in a queue.

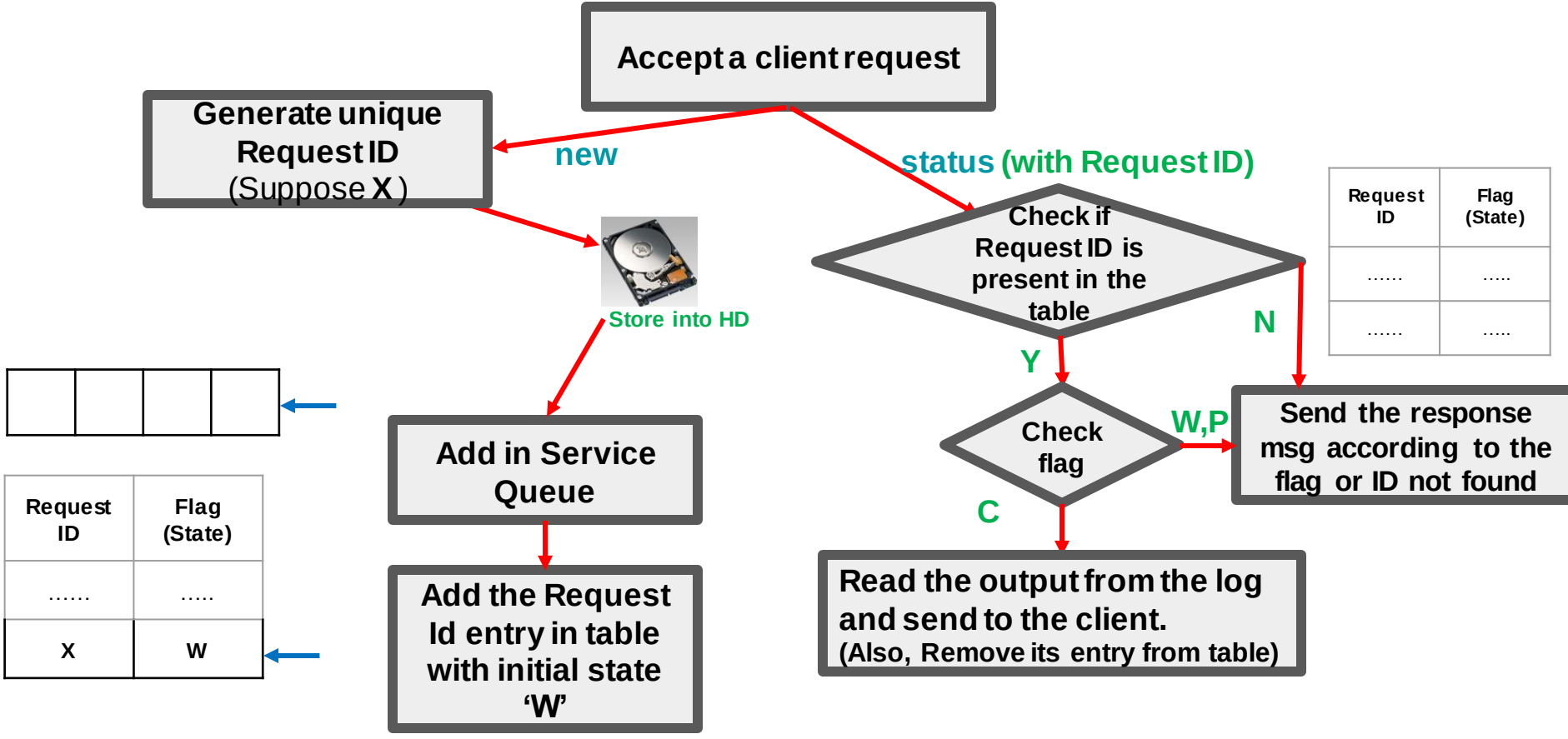
➔ **P :** The request is picked up by a working thread for processing.

➔ **C :** The request is processed by a thread.

Note: When flag becomes C, we store the output in the log file.

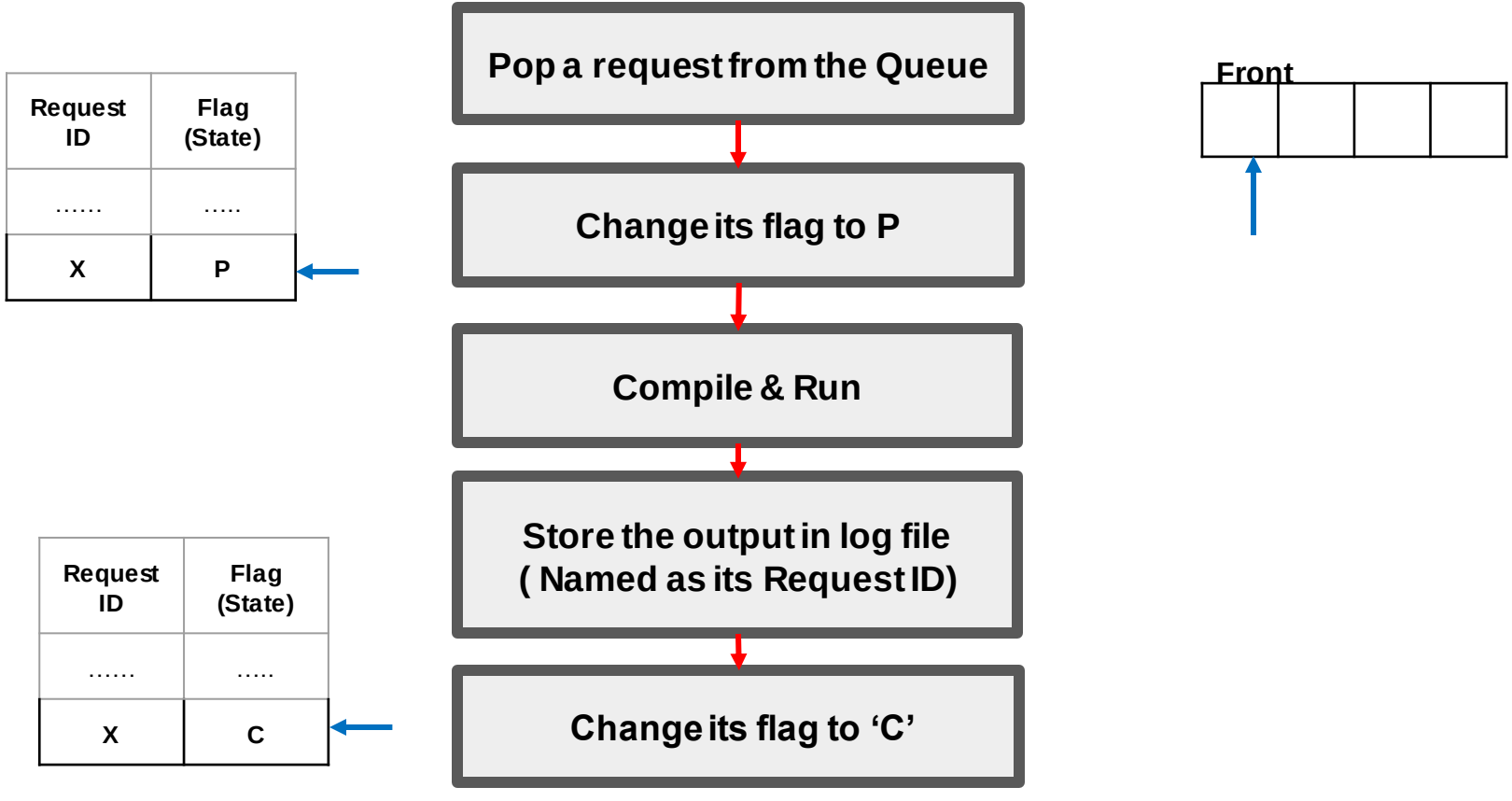
Lab10 (Cont.)

- **Main Thread Design**



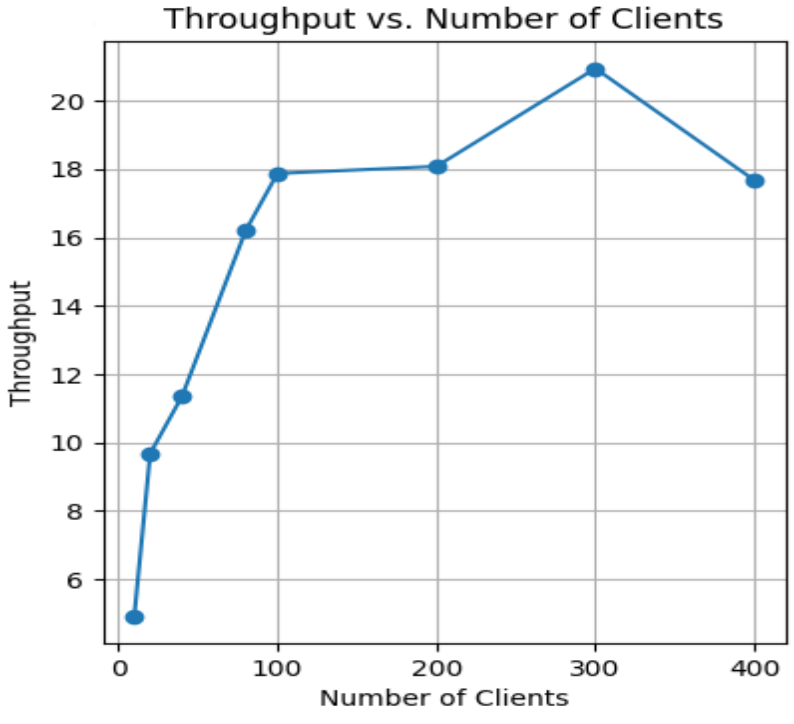
Lab10 (Cont.)

- **Worker Thread Design**



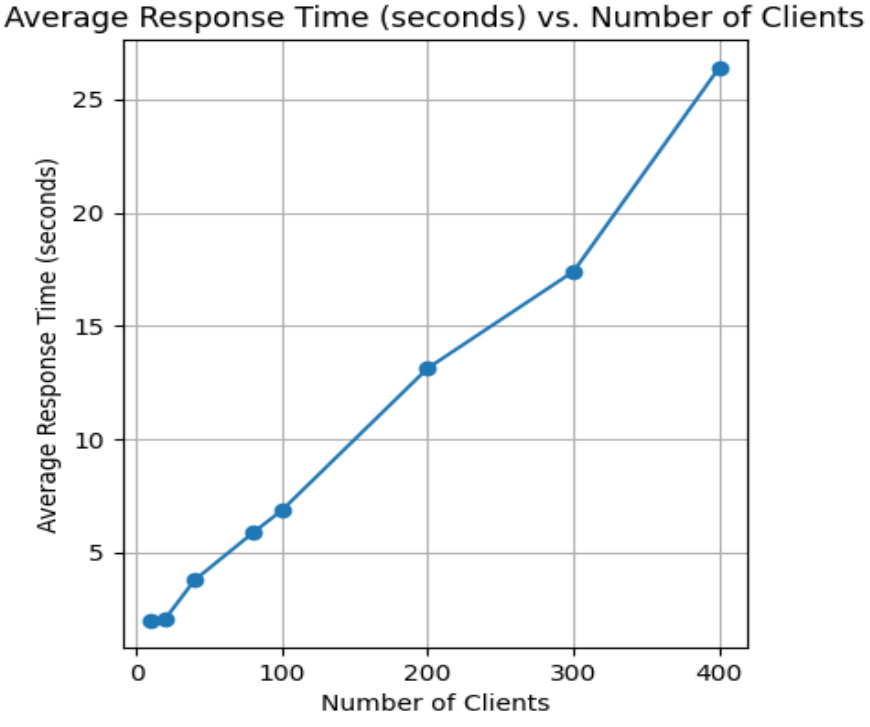
Lab10(Asynchronous)

- **Throughput**



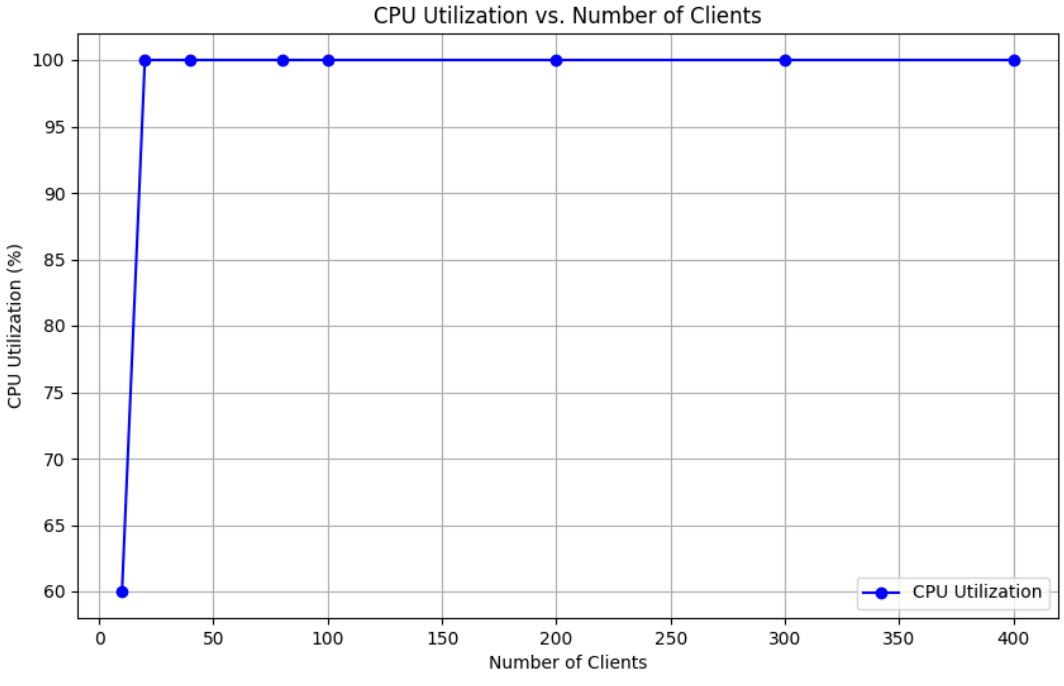
Lab10(Asynchronous)

- **Average Response Time**



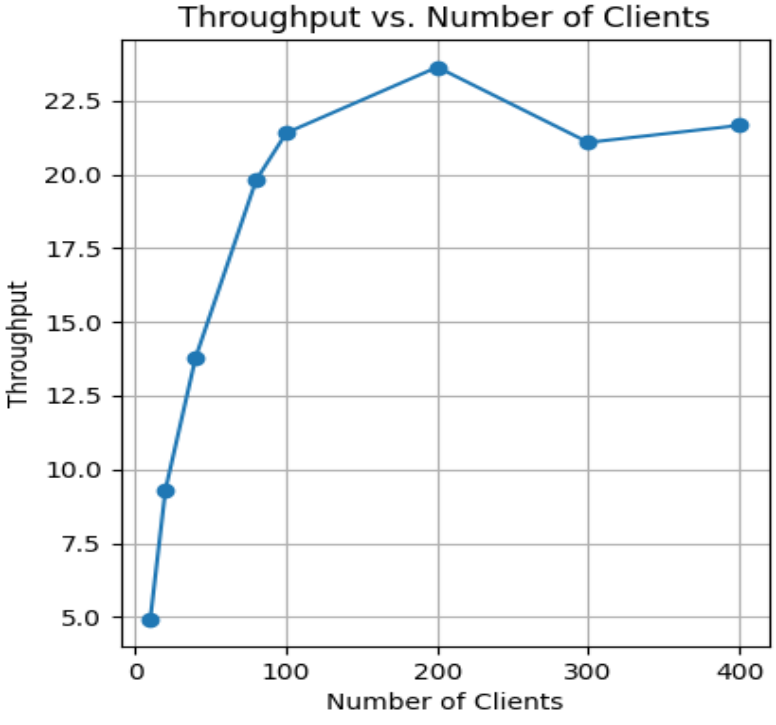
Lab10(Asynchronous)

- **Average CPU Utilization**



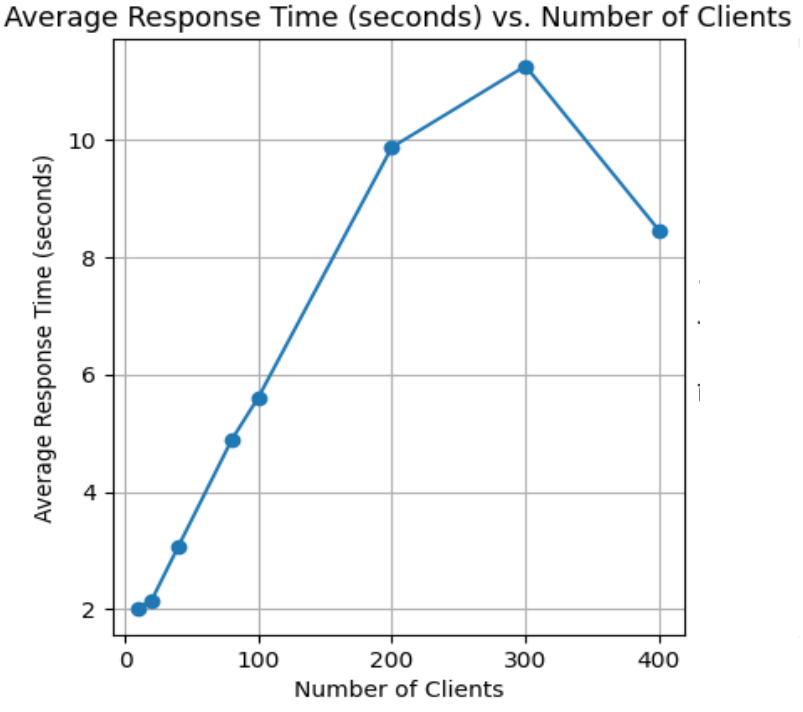
Lab11(Asynchronous)

- **Throughput**



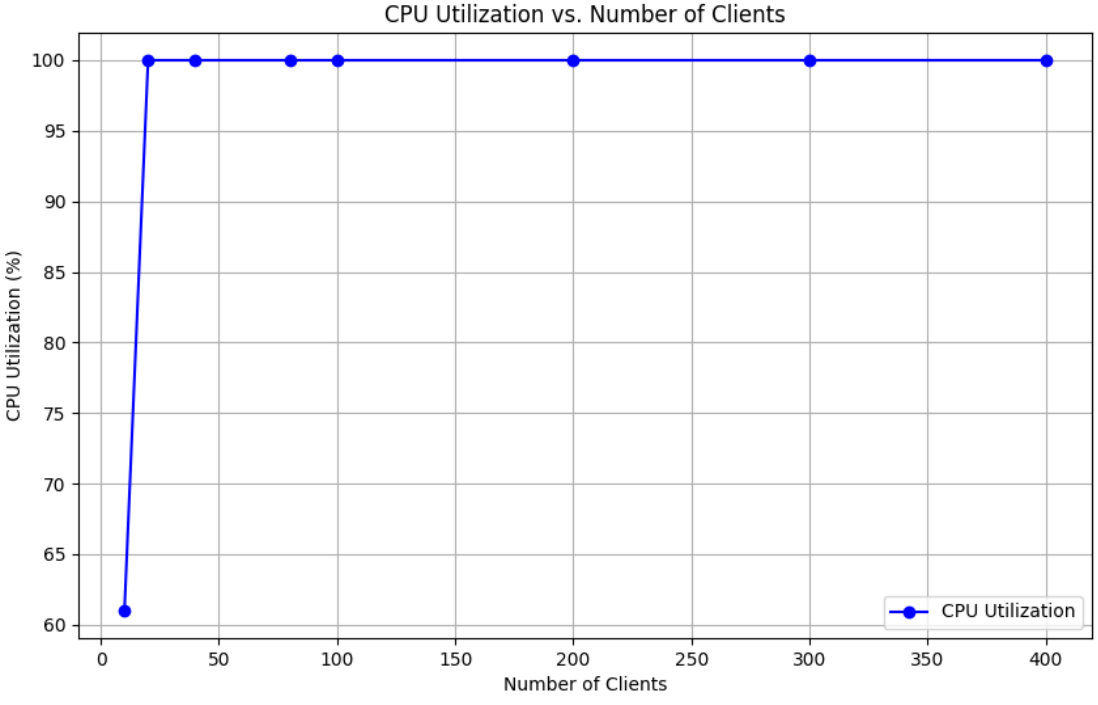
Lab11(Asynchronous)

- **Average Response Time**



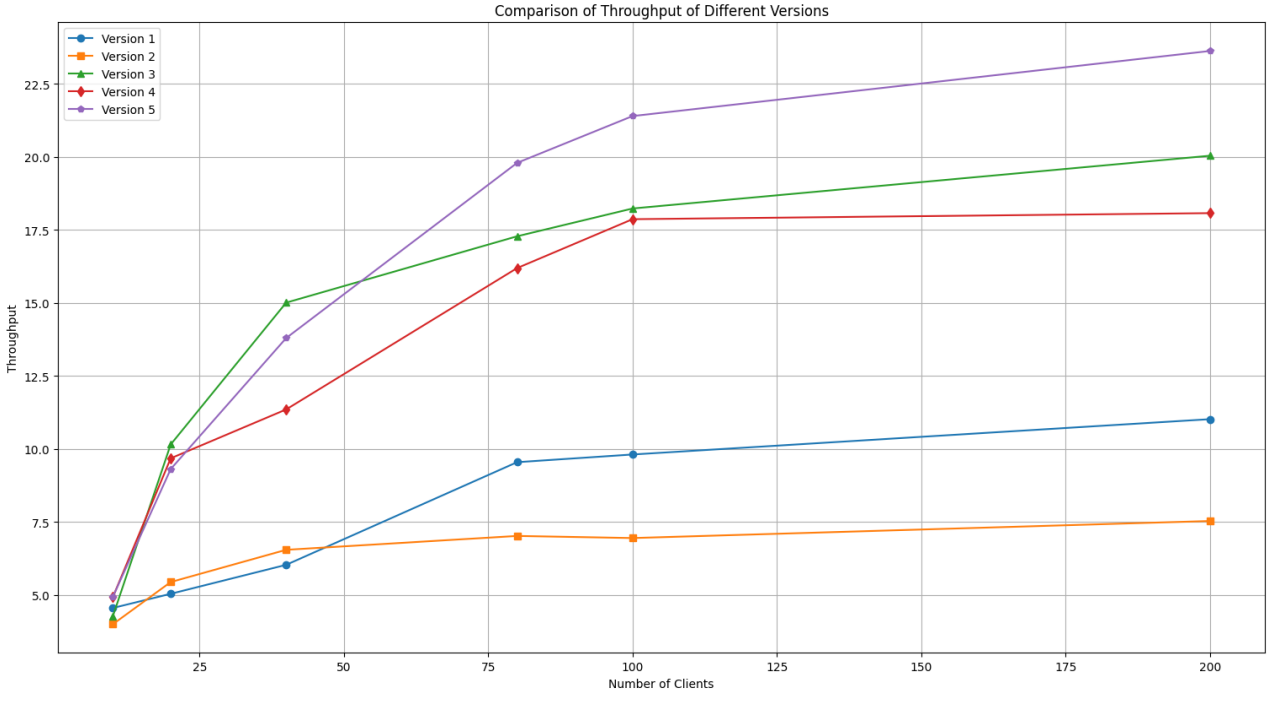
Lab11(Asynchronous)

- **Average CPU Utilization**



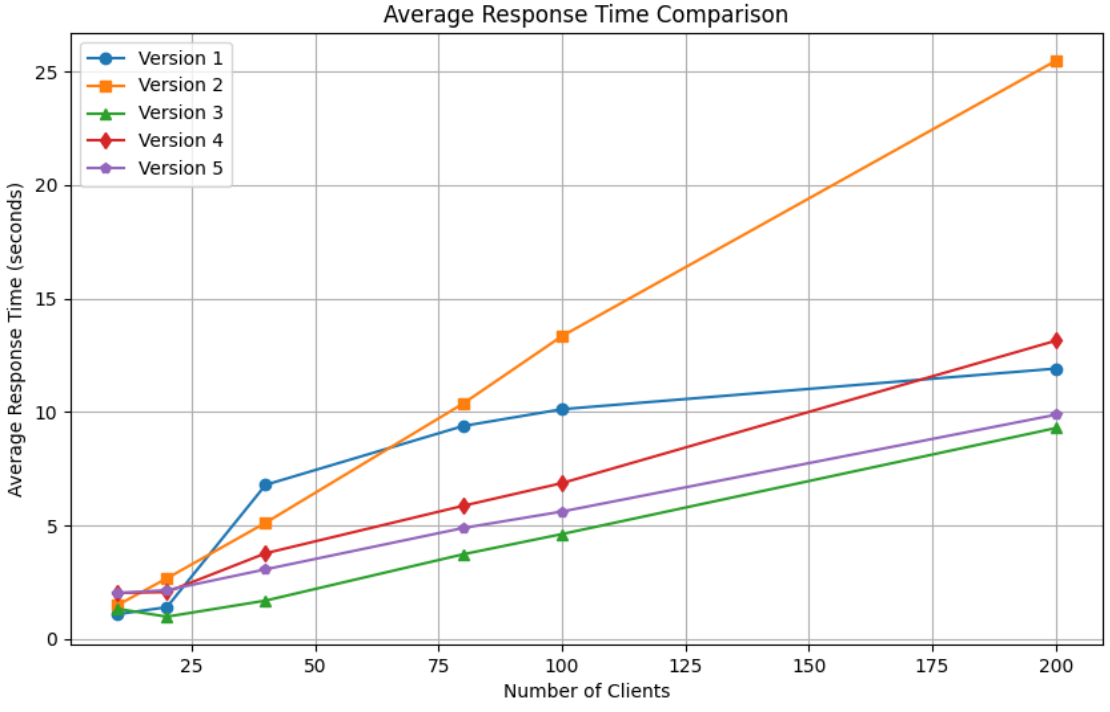
Comparison

- **Throughput**



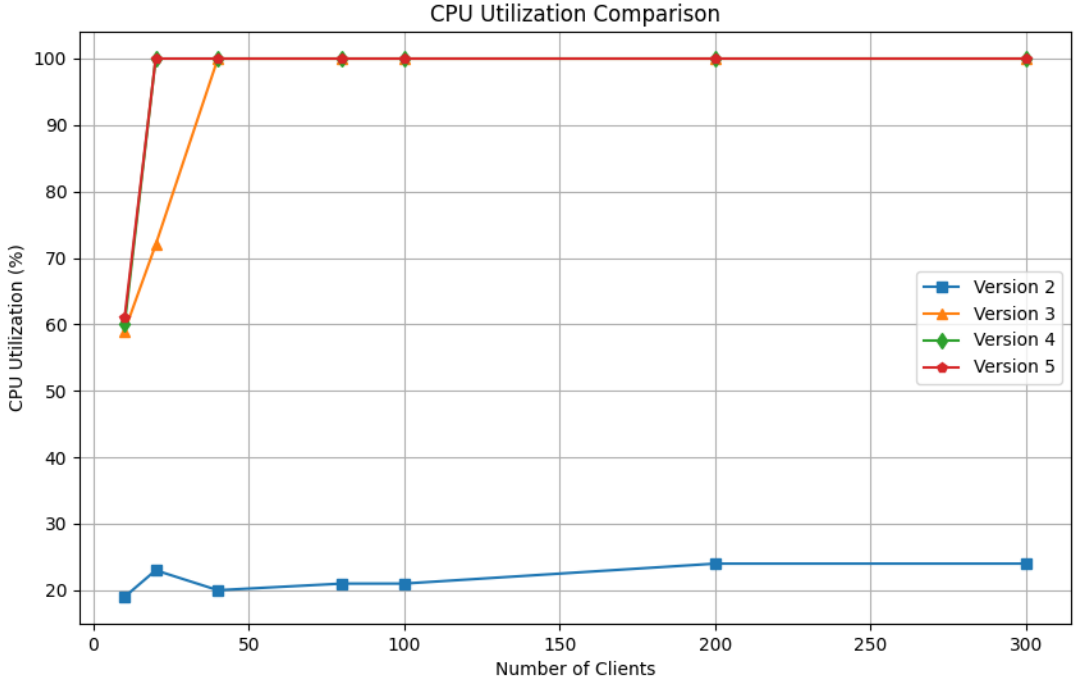
Comparison(Cont.)

- **Average Response Time**

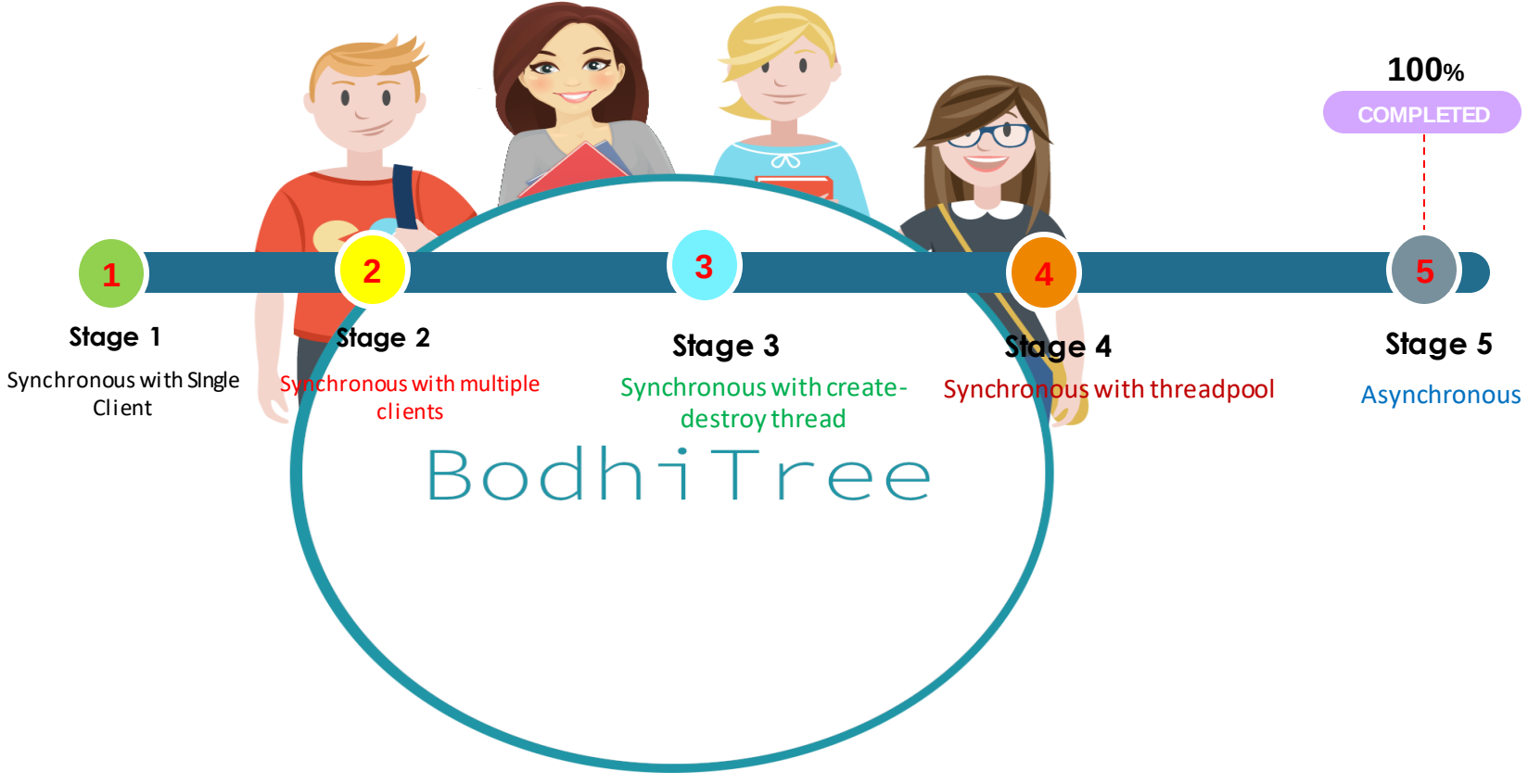


Comparison(Cont.)

- **Average CPU Utilization**



Progress


100%
COMPLETED
1
2
3
4
5
Stage 1
Synchronous with SIngle Client
Stage 2
Synchronous with multiple clients
Stage 3
Synchronous with create-destroy thread
Stage 4
Synchronous with threadpool
Stage 5
Asynchronous
BodhiTree


धन्यवाद