

# Assignment 2 report

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## ASSIGNMENT 2 REPORT

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1. Record the RTT for each chunk a client requests. Report the average RTT over all chunks across all clients for both parts. Which RTT is higher? Was this expected? Why?

**Ans.**

All RTT for each chunk are present in RTT.txt

Average of RTT times for each client are present in RTT\_avg.txt

done for n=10

2. **Report the average RTT for each chunk across all clients, for both parts. Are there any chunks whose average RTT is significantly greater than the rest?**

done for n=10

Can be easily analysed by RTT.txt

3. **An important advantage of a traditional P2P network is scalability. By avoiding the presence of a central server, we go around creating a single node as bottleneck, as load increases. Let us experiment with the value of n. Run the simulations for n = 5, 10, 50 and 100. Plot the total time taken for the simulation, right from the beginning, vs n. What do you observe? Was this trend expected?**

The time are included in Q3.txt

4. **Further, experiment with the size of the cache at the server. Take  $n=100$  for this part. Use file A2 large file.txt 1 (MD5 checksum: 89e57cef9c27f8b45cbb37f958dea193). Try values 100,200, 300, . . . ., 1000. Plot the total simulation time against these values.**
5. **The request can be sequential or random when the client requests a chunk from the server. Report the time taken to receive all the chunks in both cases. Which method takes more time? Was this expected? Why?**

ans. The randomised will take more time as many missing chunk requests will be repeated.

NOTE: I HAVE USED LRU CACHE CODE FROM GEEKS FOR GEEKS AS IT IS A VERY COMMON DATA STRUCTURE