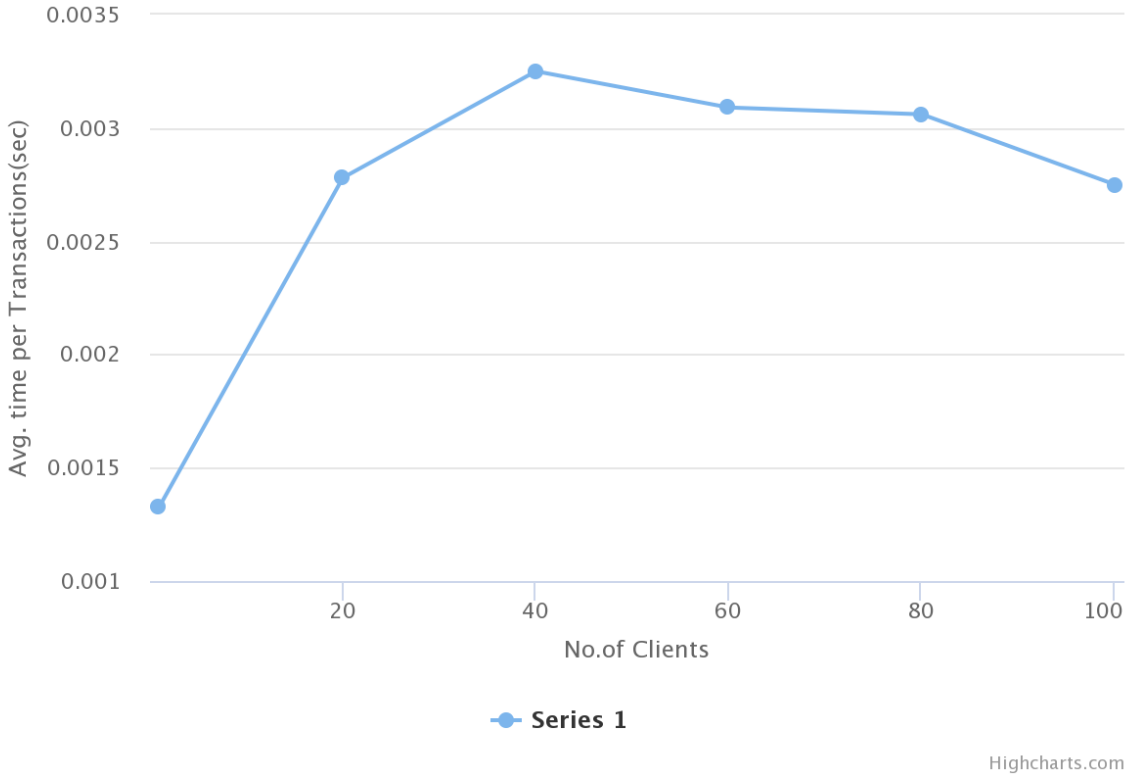
KHURANA NITIKA (BH42137)

Results

1. **Average time to complete each transaction as number of clients are increased**

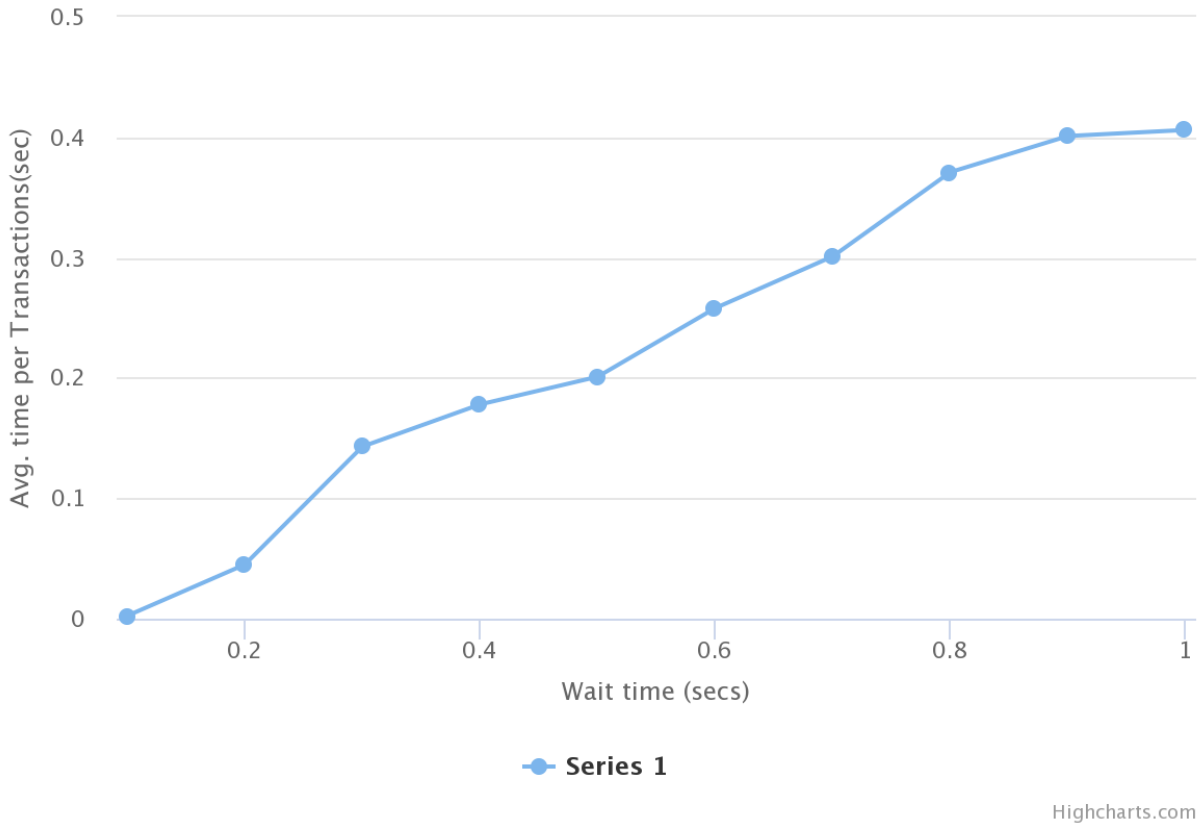


	No of clients	Avg time per transaction for each client (s)
1	1	0.00133
2	20	0.00278
3	40	0.00325
4	60	0.00309
5	80	0.00306
6	100	0.00275

The average time that is taken by each client for each transaction gradually increases in the beginning. In the beginning, as less number of clients are running concurrently, the time taken for each transaction is less. As the clients increase, multiple threads start executing in parallel. The time taken by every transaction increases as multiple executions take place. The server handler implements a lock on the account id while performing the deposit/withdrawal. This behavior however, is seen on further increase

of clients, however, when the average time for each transaction for each client is calculated, the time decreases. That is, the execution time does increase for the transactions on increasing the number of clients but the increase in time is not that much high in comparison to the clients that are running in parallel and hence the average time decreases.

2. **Average time to complete each transaction as the request rate is varied.**



As the request rate is varied, i.e. increased from 0.1s and gradually to 1s, the average time to complete each transaction for each client increases. This is because, the sleep time between the transactions has been increased.

	Request rate	**Avg time to complete each transaction for each client (s)**
1	0.1	0.0024
2	0.2	0.0045
3	0.3	0.0143

4	0.4	0.0178
5	0.5	0.0201
6	0.6	0.0258
7	0.7	0.0301
8	0.8	0.0371
9	0.9	0.0401
10	1	0.0406

Number of fixed clients=20

Number of transactions assumed in both cases = 3