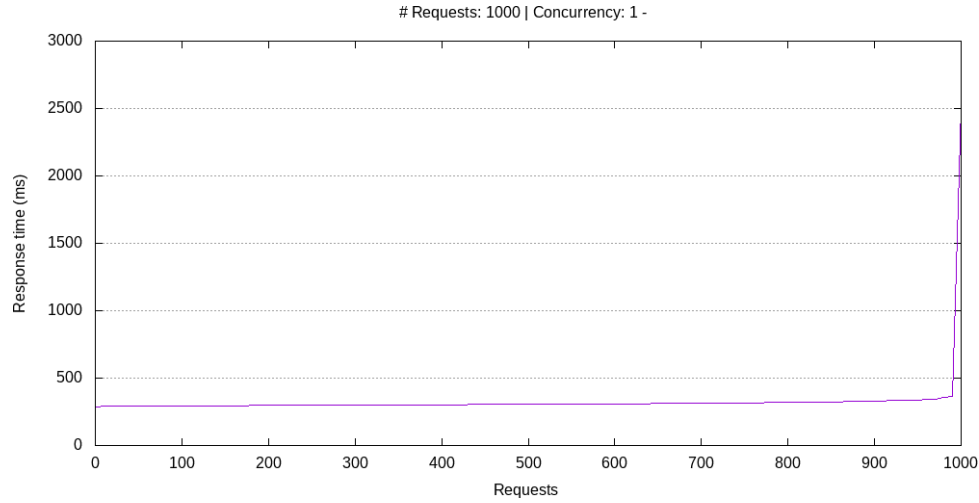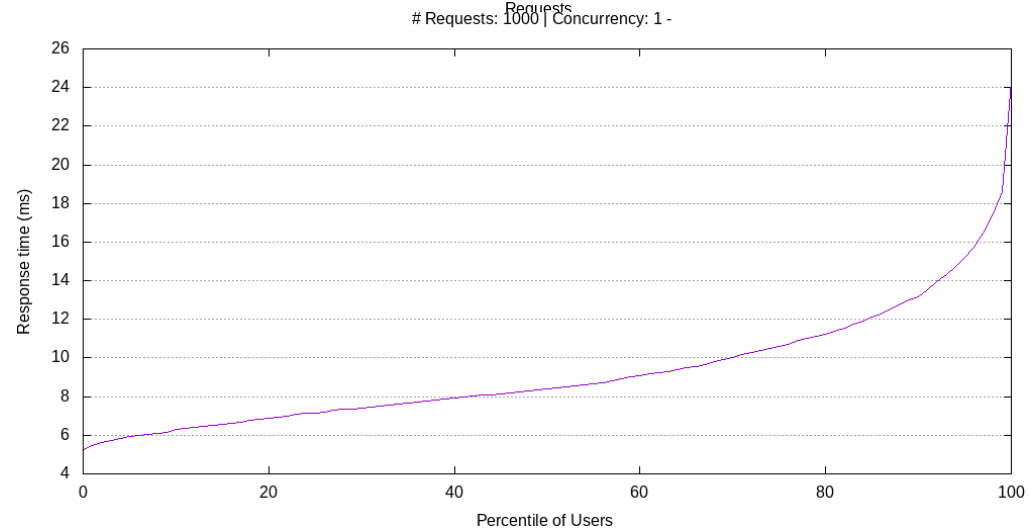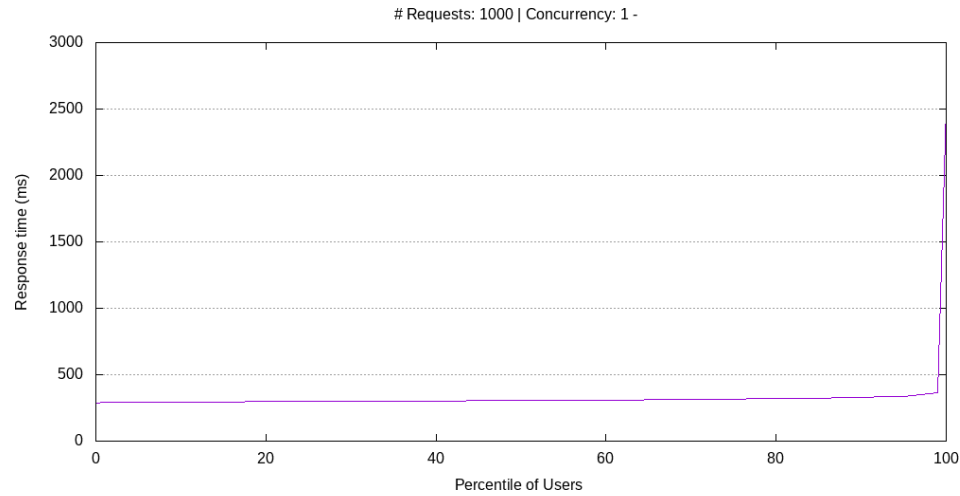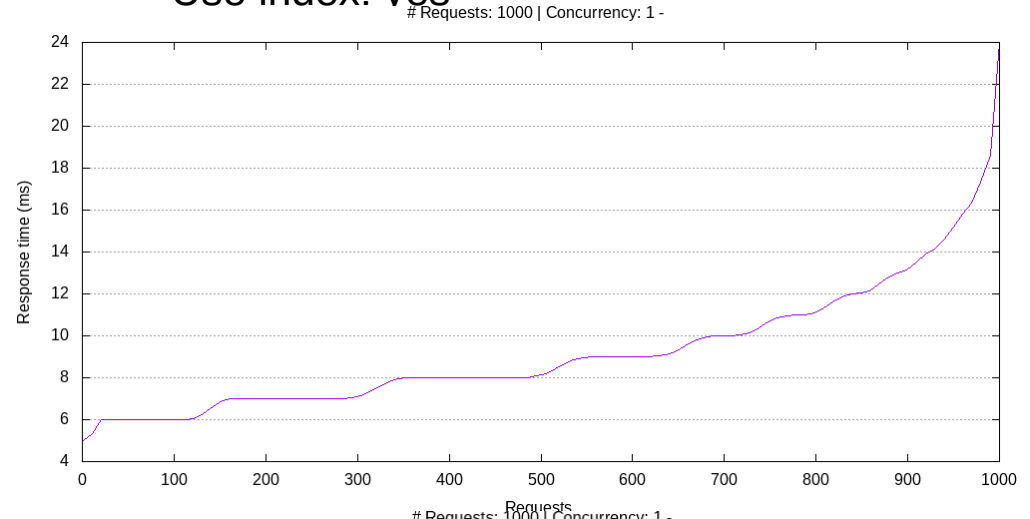# Test report

Database MySQL index test

For 1/10/100/1000 amount of simultaneous requests. Results represented with and without database index. Two plots for every option – latency and throughput.
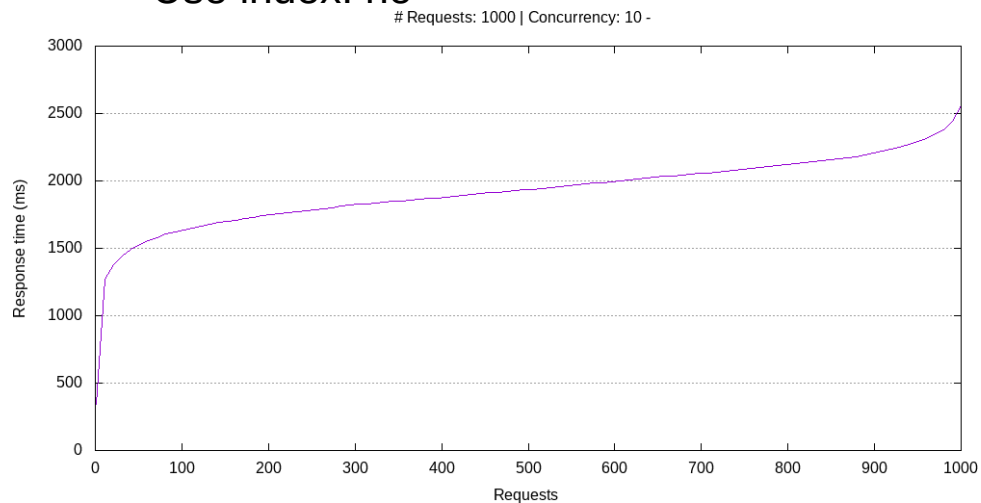
1 thread
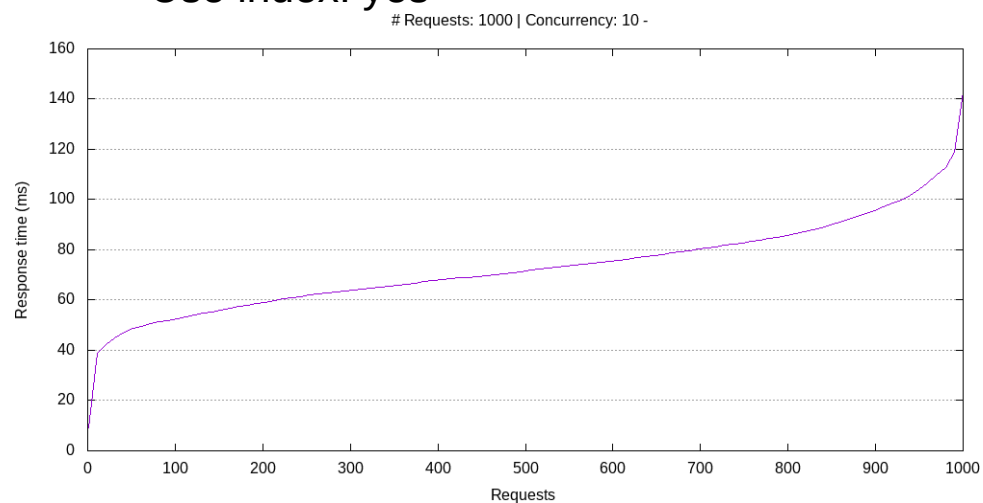
Use index: no

Use index: yes

10 thread

Use index: no
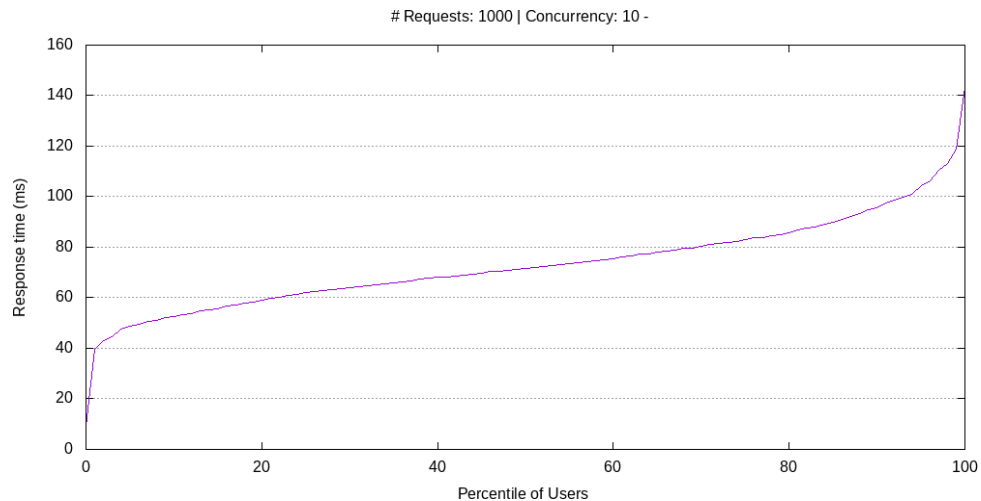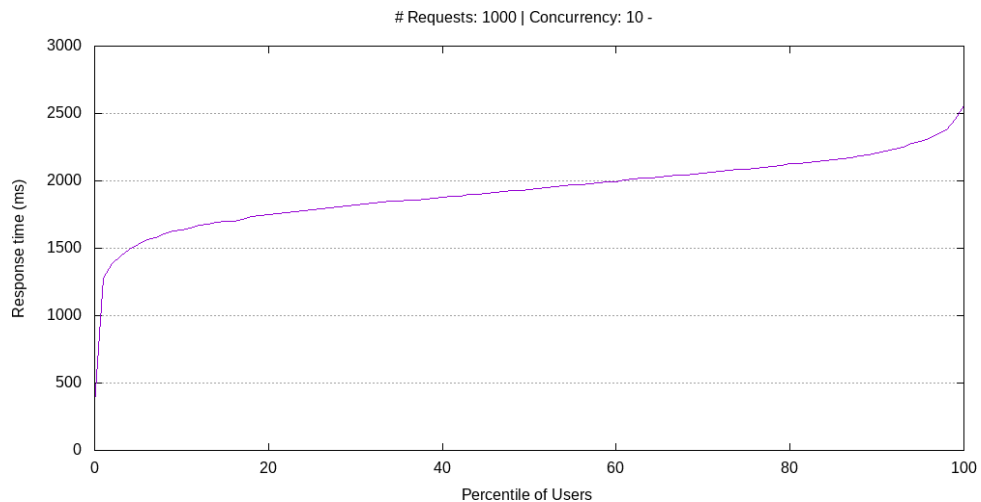
Use index: yes

100 thread

Use index: no

Requests: 1000 | Concurrency: 100 -

Requests: 1000 | Concurrency: 100 -

Use index: yes

Requests: 1000 | Concurrency: 100 -

Requests: 1000 | Concurrency: 100 -

1000 thread

Use index: no

Requests: 1000 | Concurrency: 1000 -

Requests: 1000 | Concurrency: 1000 -

Use index: yes

Requests: 1000 | Concurrency: 1000 -

Requests: 1000 | Concurrency: 1000 -
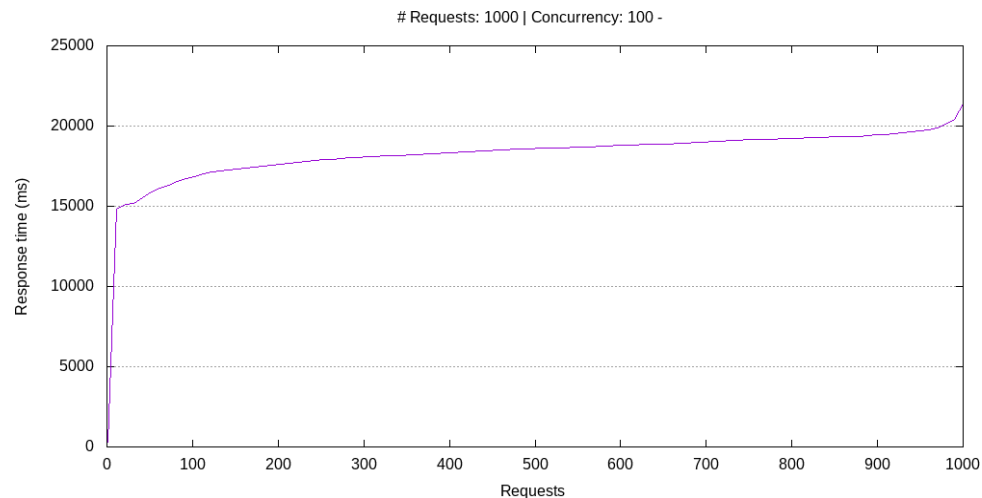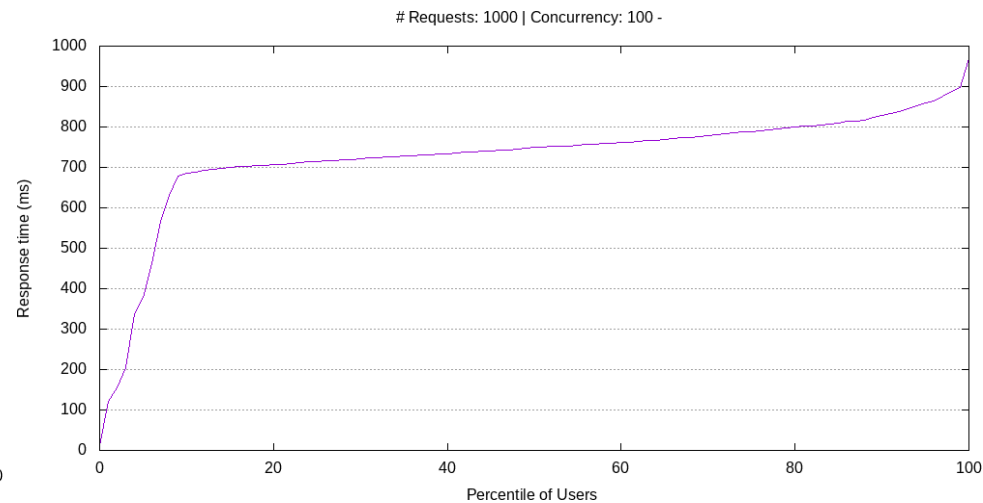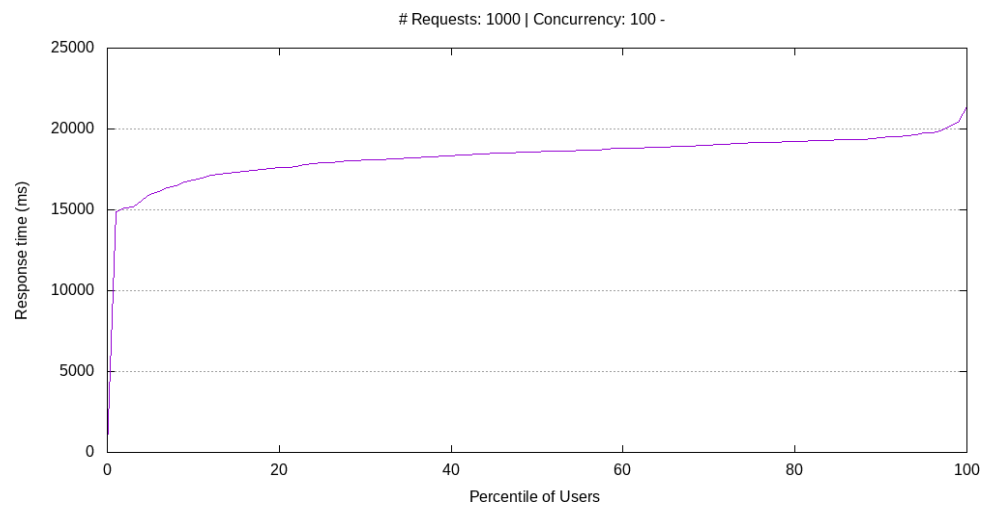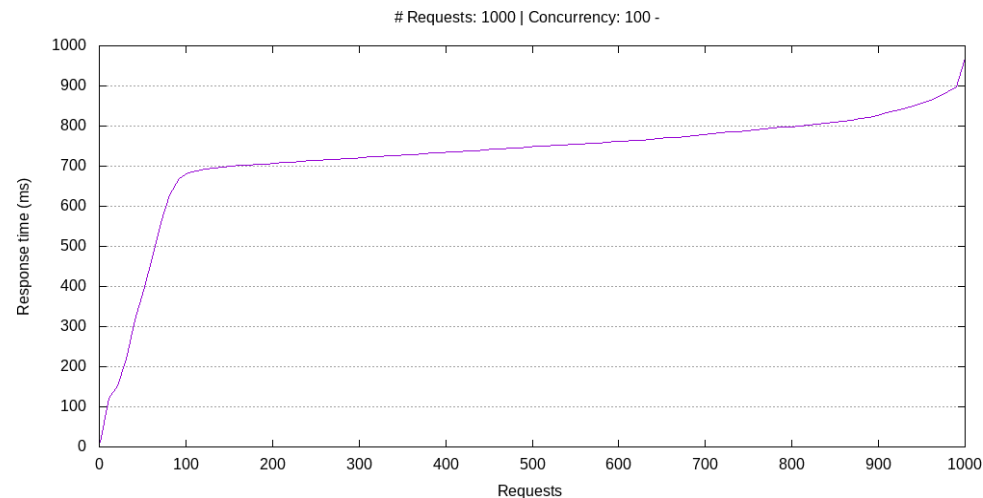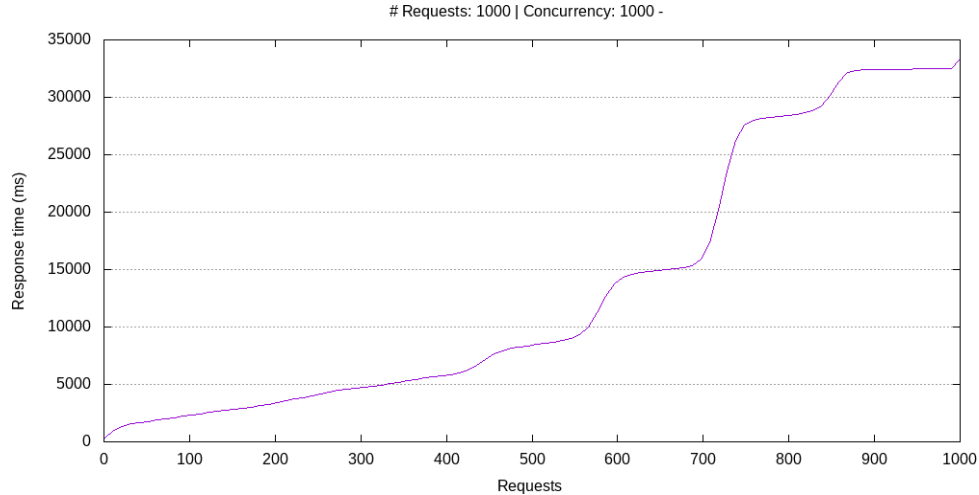
Queries

- Query for add index
  CREATE INDEX profile_fname_sname ON profile(fname, sname)

- Explain output
  mysql> explain SELECT crid, fname, sname, age, gender, hob, city FROM profile WHERE fname LIKE 'Ave' and sname LIKE 'Che' ORDER BY crid;

-

- +----+-------------+---------+------------+-------+-------------------+-------------------+---------+------+------+----------+----------------------------------+

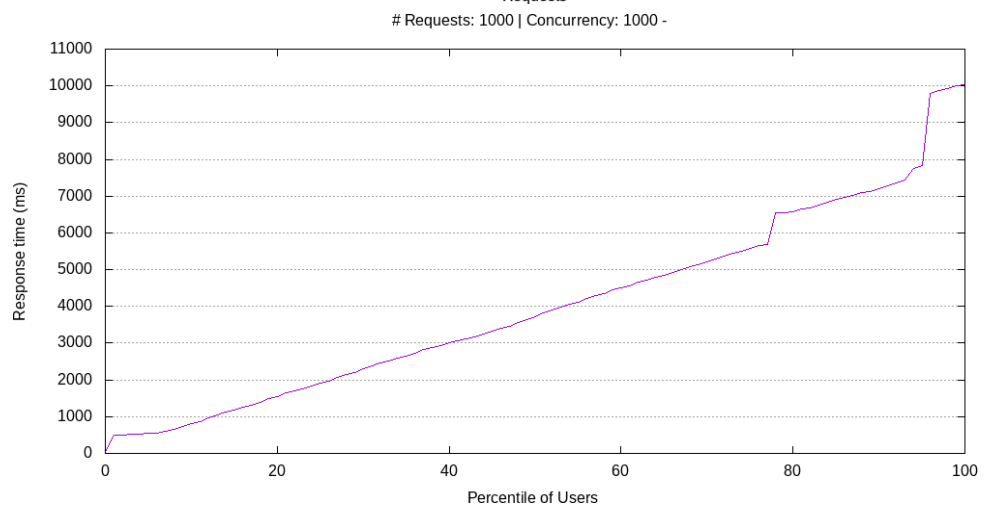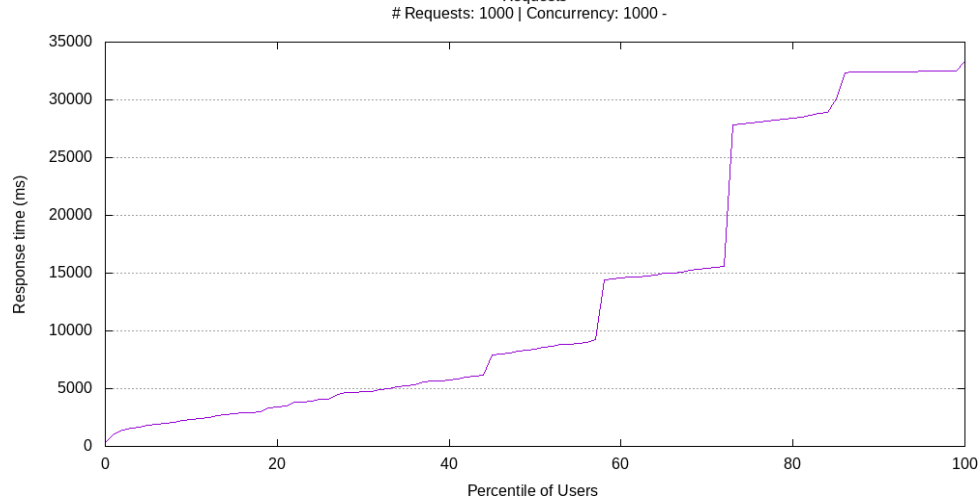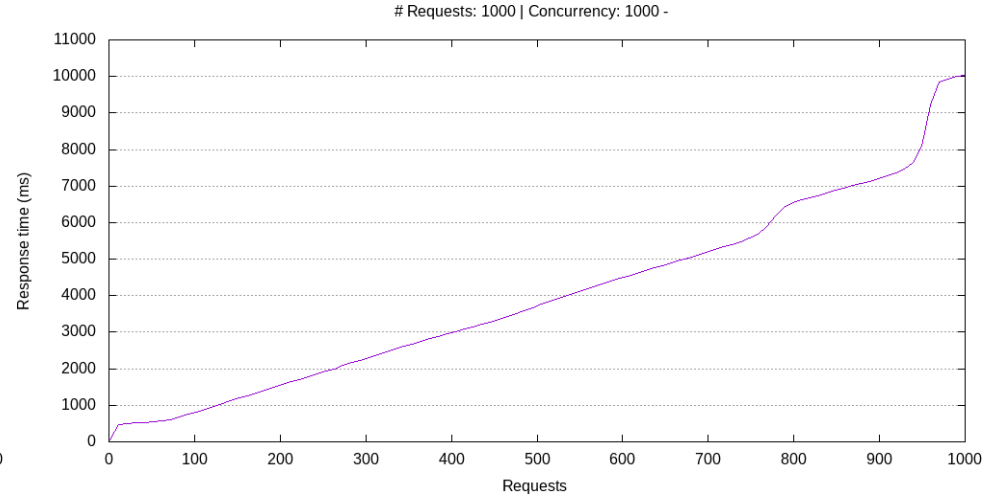- | id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |

- +----+-------------+---------+------------+-------+-------------------+-------------------+---------+------+------+----------+----------------------------------+

- | 1 | SIMPLE | profile | NULL | range | profile_fname_sname | profile_fname_sname | 1204 | NULL | 1 | 100.00 | Using index condition; Using filesort |

- +----+-------------+---------+------------+-------+-------------------+-------------------+---------+------+------+----------+----------------------------------+

- 1 row in set, 1 warning (0.03 sec)

- Why index was chosen like that?
  Because necessary search based on fname and sname. And fname has first place in select query.