**Technical Stack:**

Python Programming language

MYSQL as database

Django for the APIs

**Step 1:**

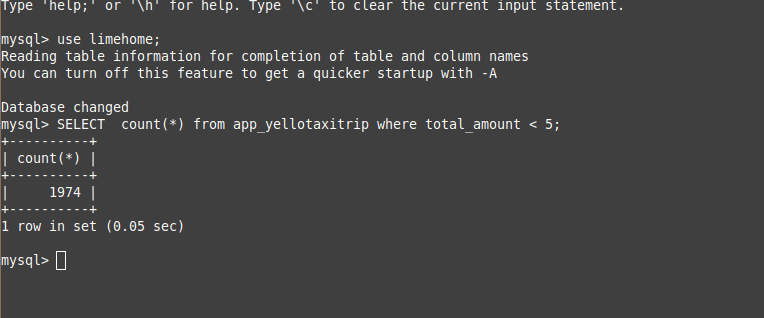
**SQL Queries:**

**Total records at the time of query:**

219859

Query 1 :

SELECT count(\*) from app\_yellotaxitrip where total\_amount < 5;

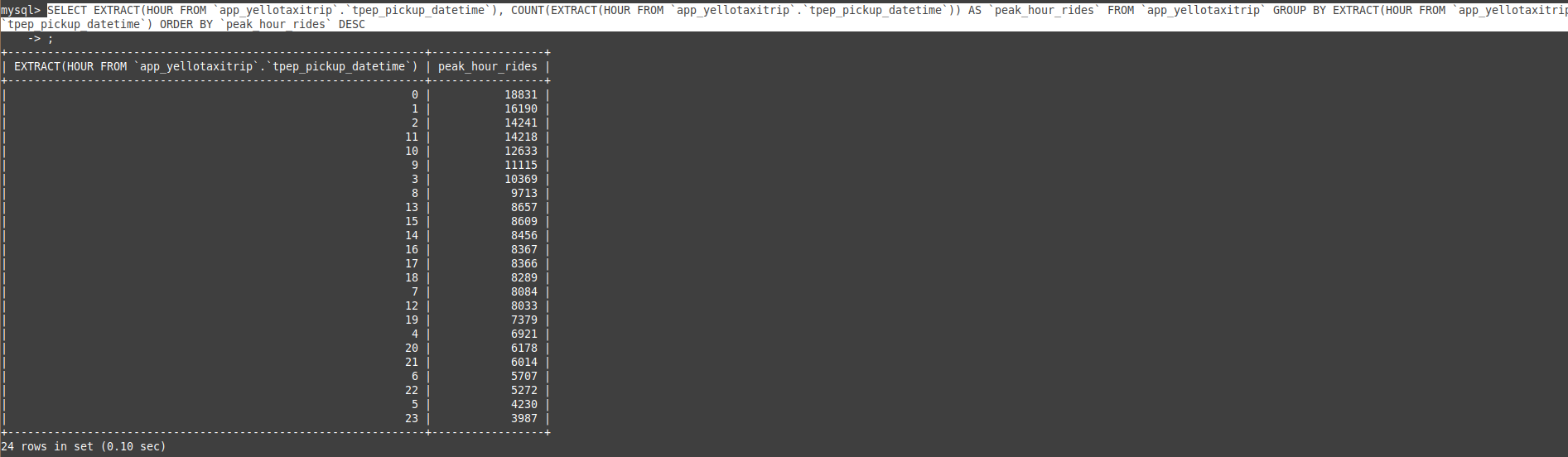


Execution time:

0.05 sec

Query 2:

SELECT EXTRACT(HOUR FROM `app\_yellotaxitrip`.`tpep\_pickup\_datetime`), COUNT(EXTRACT(HOUR FROM `app\_yellotaxitrip`.`tpep\_pickup\_datetime`)) AS `peak\_hour\_rides` FROM `app\_yellotaxitrip` GROUP BY EXTRACT(HOUR FROM `app\_yellotaxitrip`.`tpep\_pickup\_datetime`) ORDER BY `peak\_hour\_rides` DESC;

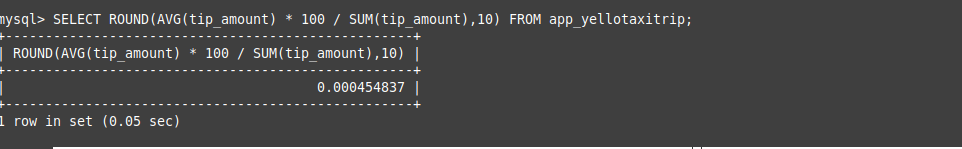


Execution time:

0.10 sec

Query 3 :

SELECT ROUND(AVG(tip\_amount) \* 100 / SUM(tip\_amount),10) FROM app\_yellotaxitrip;



Execution time:

0.05 sec

**Step 02:**

When the amount of data is increased.

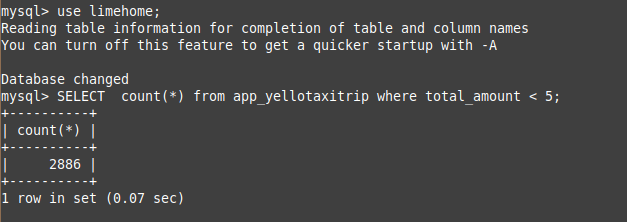
**SQL Queries:**

**Total records at the time of query:**

314482

Query 1:

SELECT count(\*) from app\_yellotaxitrip where total\_amount < 5;

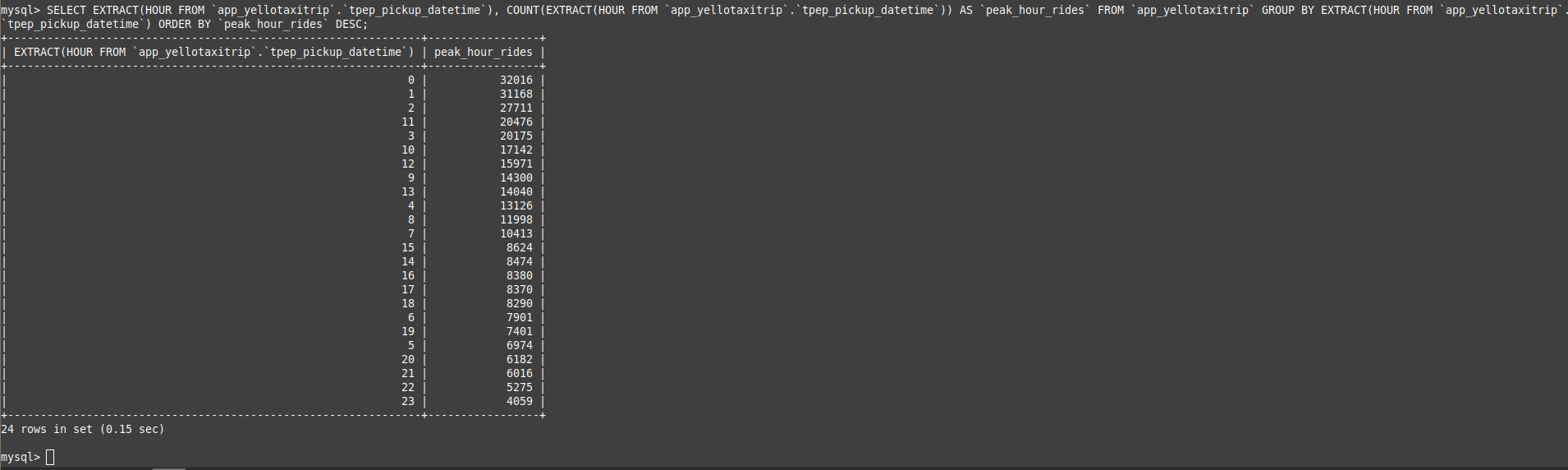


Execution time:

0.07 sec

Query 2:

SELECT EXTRACT(HOUR FROM `app\_yellotaxitrip`.`tpep\_pickup\_datetime`), COUNT(EXTRACT(HOUR FROM `app\_yellotaxitrip`.`tpep\_pickup\_datetime`)) AS `peak\_hour\_rides` FROM `app\_yellotaxitrip` GROUP BY EXTRACT(HOUR FROM `app\_yellotaxitrip`.`tpep\_pickup\_datetime`) ORDER BY `peak\_hour\_rides` DESC;

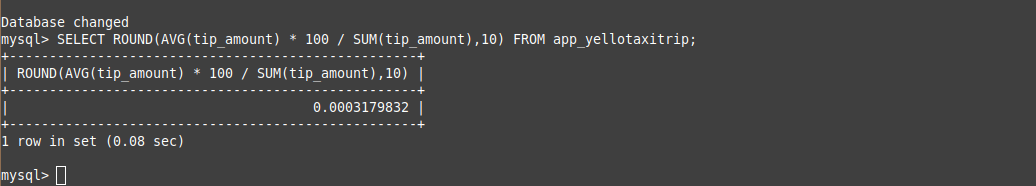


Execution time:

0.15 sec

Query 3:

SELECT ROUND(AVG(tip\_amount) \* 100 / SUM(tip\_amount),10) FROM app\_yellotaxitrip;



Execution time:

0.08 sec