1. Execution time of each query
2. List the number of inactive customers

A screenshot of a computer

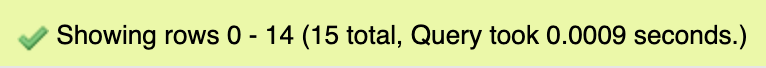
Description automatically generated



Did not give a specific time. So instead of asking for counts, I asked for a table.

A black text with purple and green letters

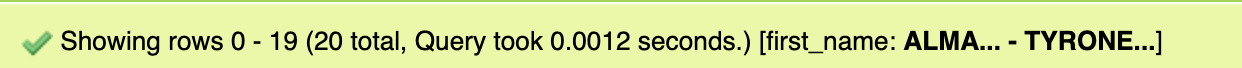
Description automatically generated



1. List all the customers whose last name start with “A”. Order the list by first name in ascending order.

A close-up of a computer code

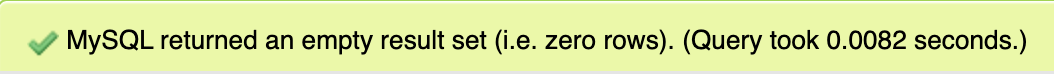
Description automatically generated



1. Are there any films with no category assignment?

A white background with purple text

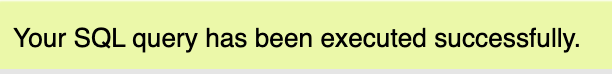
Description automatically generated



1. How many movies have the word “Drama” in their descriptions?

A white background with black and purple text

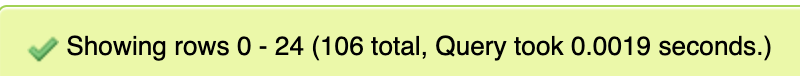
Description automatically generated



Did not give a specific time. Did the same thing as #1.

A black and purple text

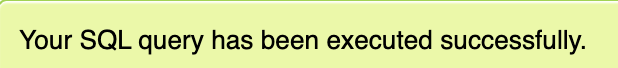
Description automatically generated



1. How many “Action” movies do we have?

A close-up of a website

Description automatically generated



As above.

A close-up of a website

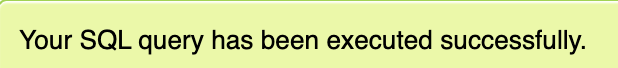
Description automatically generated



1. How many customers live in Canada?

A computer screen shot of a code

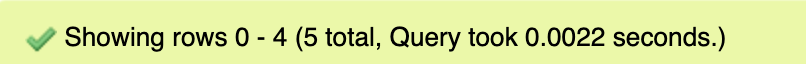
Description automatically generated



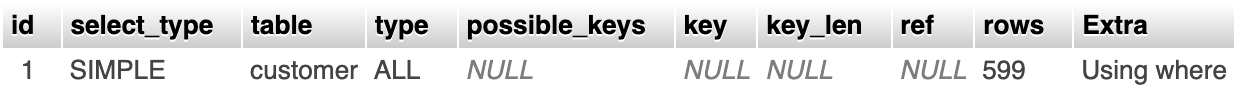
As above.

A computer code with text

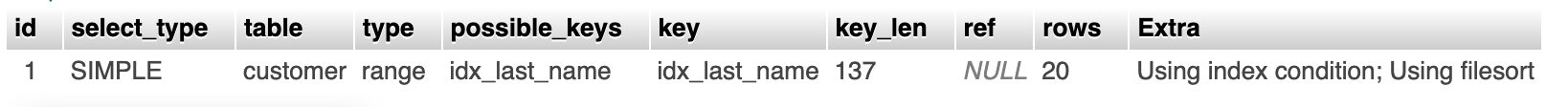
Description automatically generated



1. Use EXPLAIN to figure out which indexes are used.
   1. No index is used.



* 1. Idx\_last\_name is used.

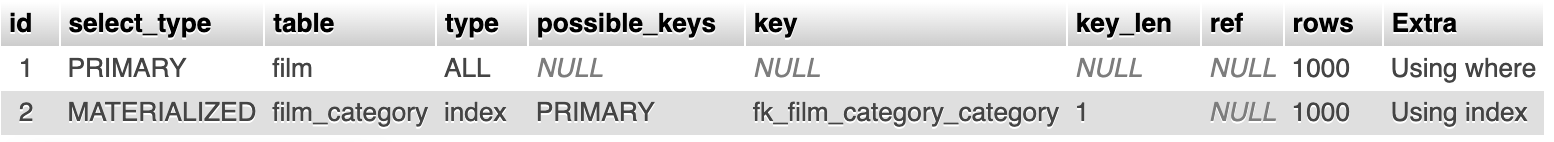


Indexes in Table “customer”:

A screenshot of a computer

Description automatically generated

* 1. PRIMARY is used.



Indexes in Table “film\_category”:

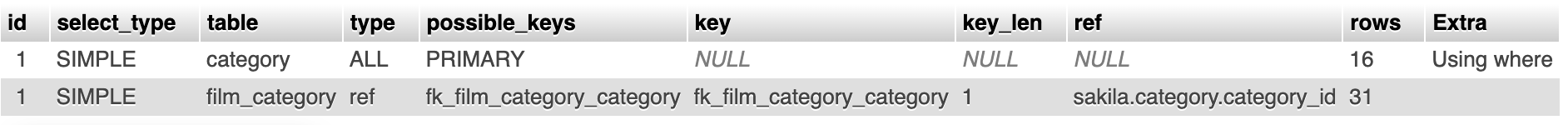
A screenshot of a box

Description automatically generated

* 1. No index is used.



* 1. Fk\_film\_category\_category is used.



Indexes in Table “film\_category” are as above (#3)

* 1. PRIMARY and idx\_fk\_country\_id from table “city”, PRIMARY and idx\_fk\_city\_id from table “address”, and idx\_fk\_address\_id from table “customer” are used.

A screenshot of a computer

Description automatically generated

Indexes in Table “city” and “address” respectively:

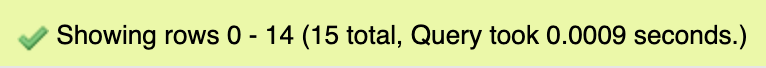
A screenshot of a computer

Description automatically generated

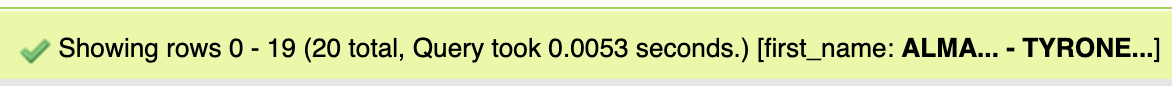
A screenshot of a computer

Description automatically generated

1. Delete (or add) some indices.
2. I tried to add “active” as the index in “customer” table, but the execution time did not change.



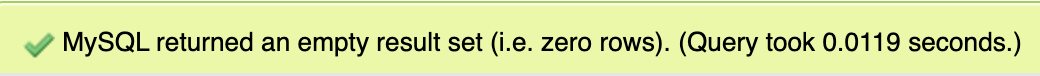
1. I added “first name” as the index in “customer” table. The execution time largely increased.



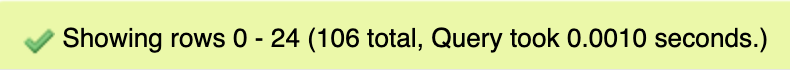
Then I dropped “last\_name”. The execution time reduced a little but still slower compare to the original setting.



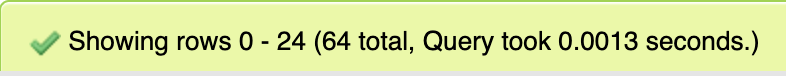
1. Dropped index “category\_id” from film\_category table. The execution time increased.



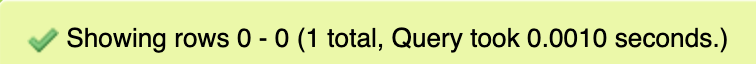
1. Added “decsciption” as an index in “film” table. The execution time reduced.



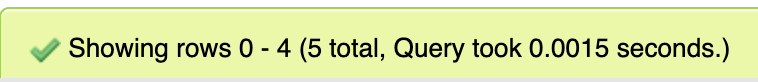
1. Added “name” as an index in “category” table. The execution time increased a little.



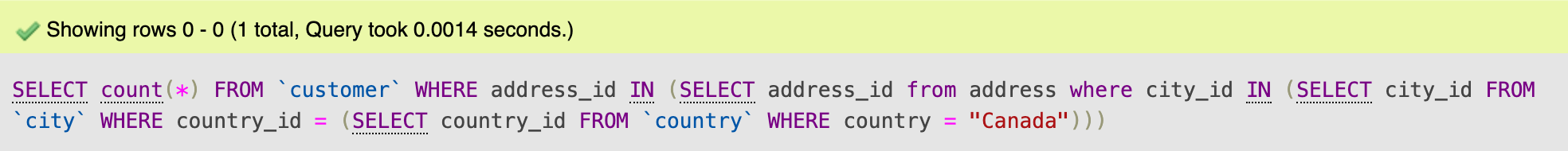
Tried a different query from the HW 6.1 comment. The execution time reduced a little compared to the original query.



1. Added “country” as an index in “country” table, “city” in “city” table, and “address” in “address” table. The execution time reduced a little compared to the original query.



Tried a different query from the HW 6.1 comment. The execution time reduced further.



1. Try the queries again and show their execution time.
   * Which queries get slower (faster)?

See Question 3 above.