Name: Kartik Jolapara **SapID:** 60004200107
Batch: B1

ADBMS Experiment-3

Kartik Jolapara
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B1 ADBMS
Exp 3

Page No. 1
Date

Aim: To simulate query optimisation by performing SQL query on database

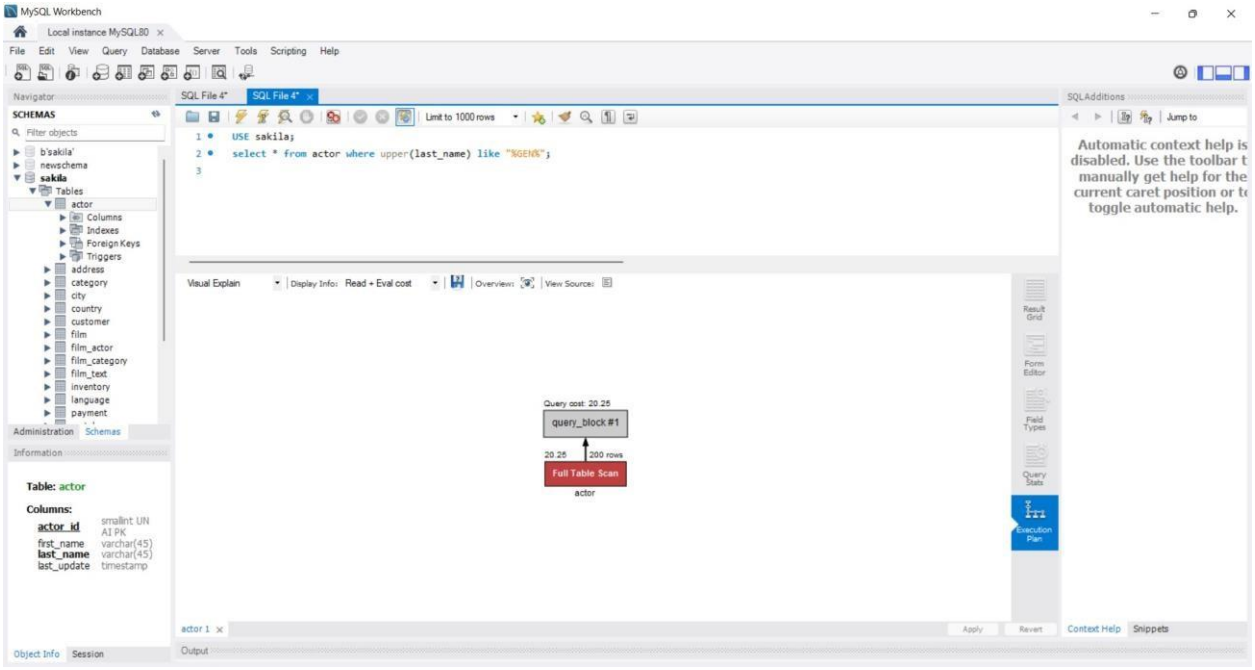
Theory: Query optimization is of great importance for performance of a relational database, especially for ~~extra~~ execution of complexed SQL statements.
There are 2 ways:-
1) Heuristic Based 2) Cost Based

Heuristic Based:-
A query tree is a data structure that corresponds to a relational algebra expression. The same query could be corresponding to many different relational expressions & hence many different query trees. The task of heuristic optimization of query trees is to find a final query tree that is efficient to execute. The main heuristic is to apply first the operations that reduce the size of intermediate results

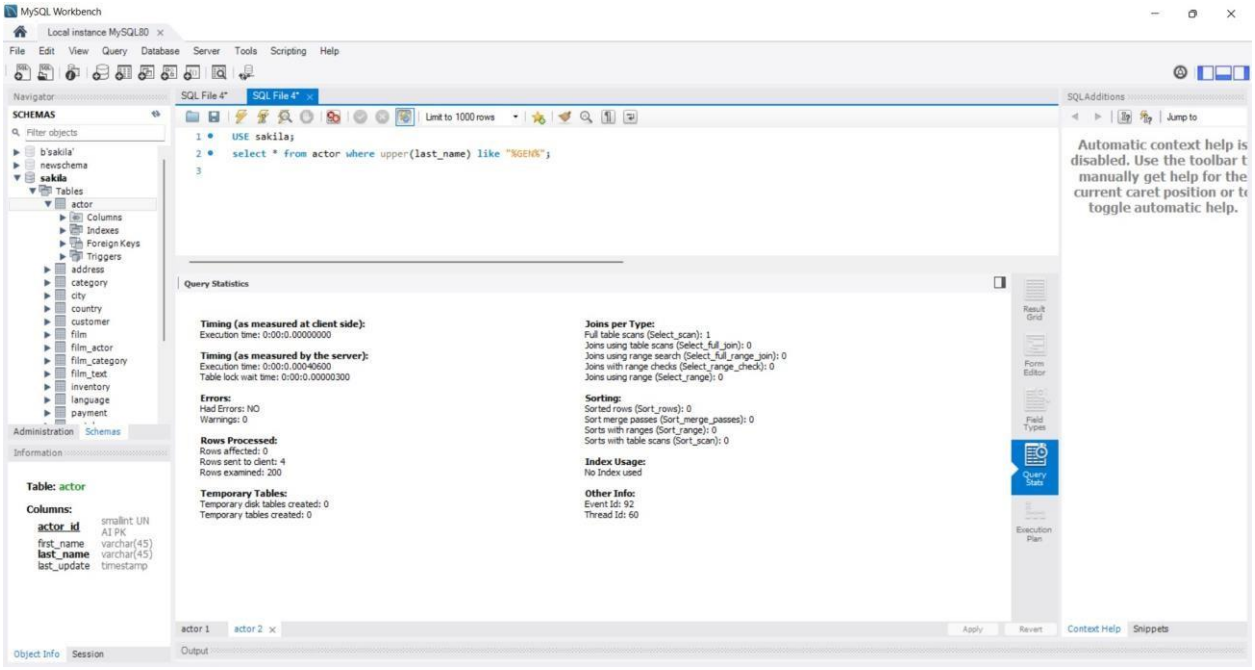
Cost Based:-
Estimate and compare the costs of executing a query using different execution strategies and chose the strategy with lowest cost estimate. The cost of any query includes access cost to secondary storage, storage cost, memory usage cost, no. of memory buffer at time of execution, communication etc

Conclusion: In this experiment we have performed table level and index level optimization and compared it to the results of no optimization.

1) SELECT QUERY



BEFORE OPTIMIZING



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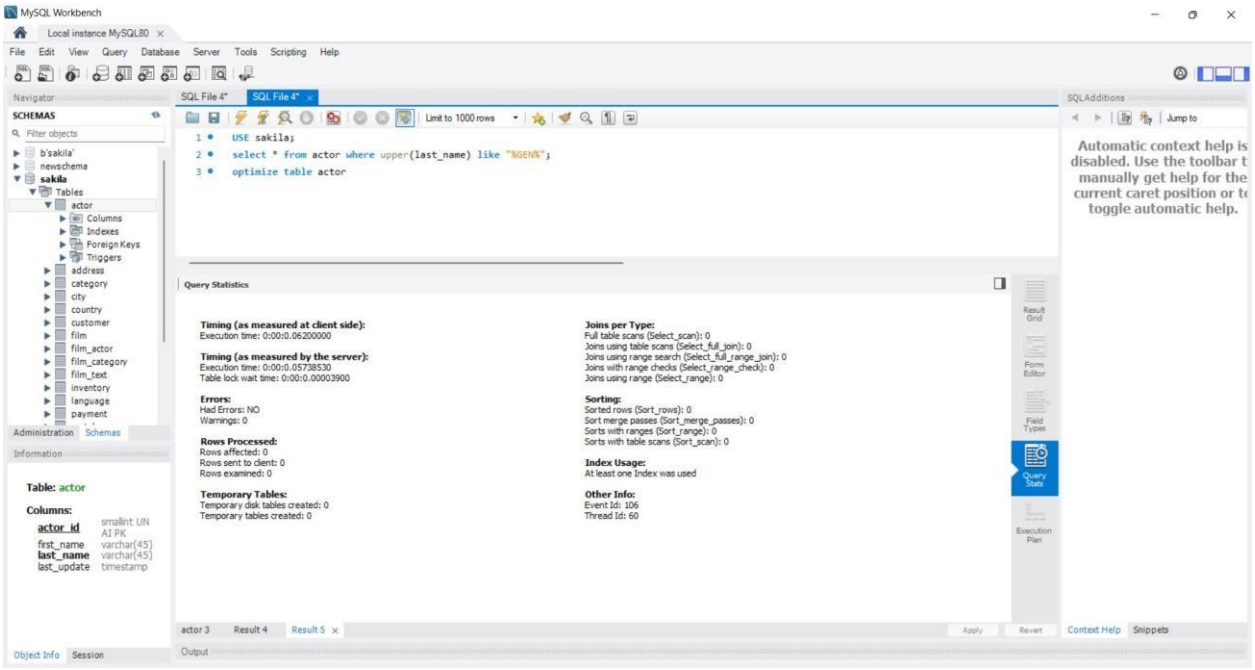
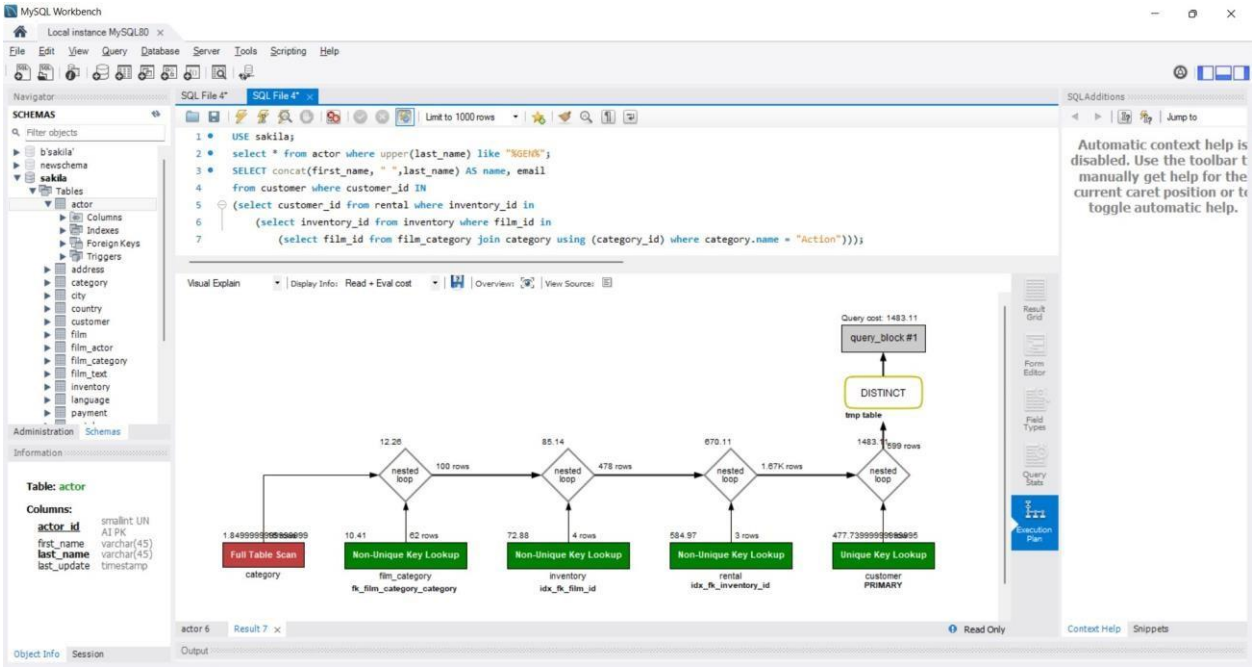


2) NESTED



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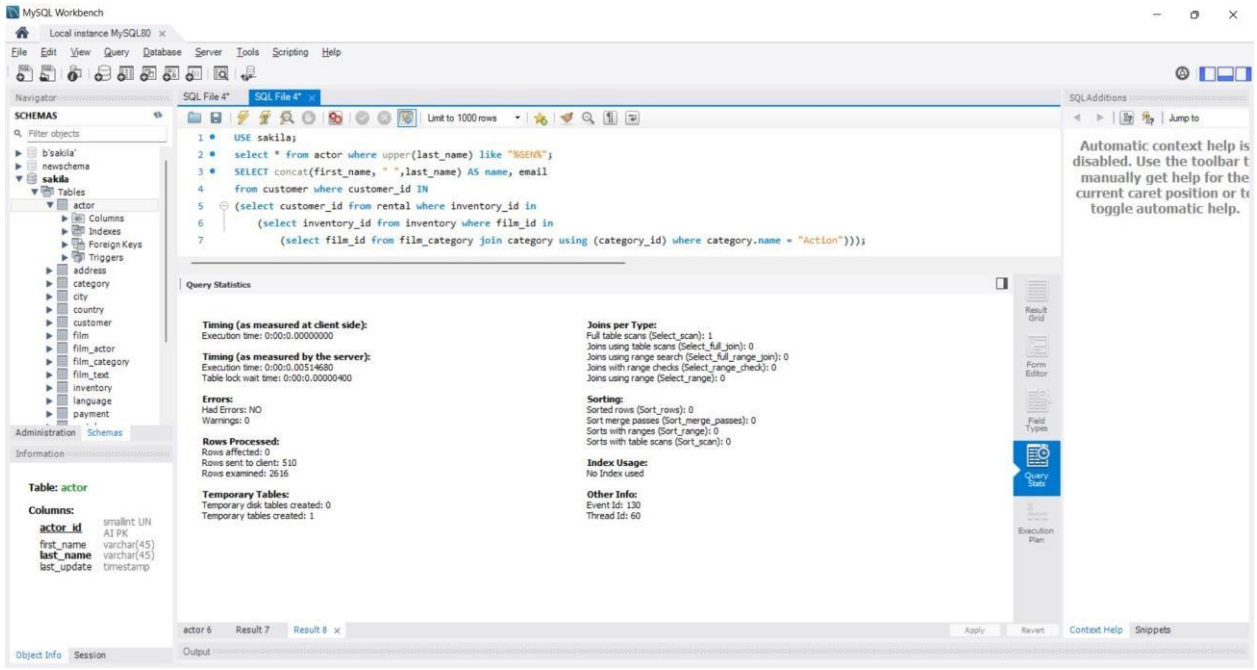

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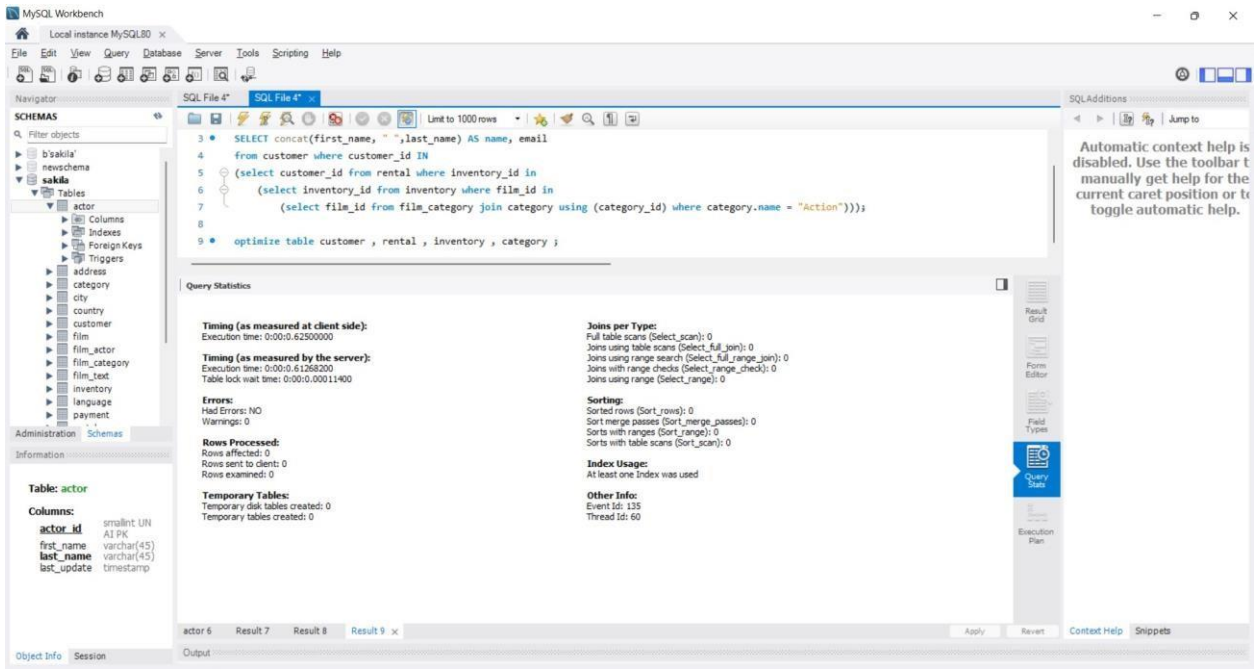
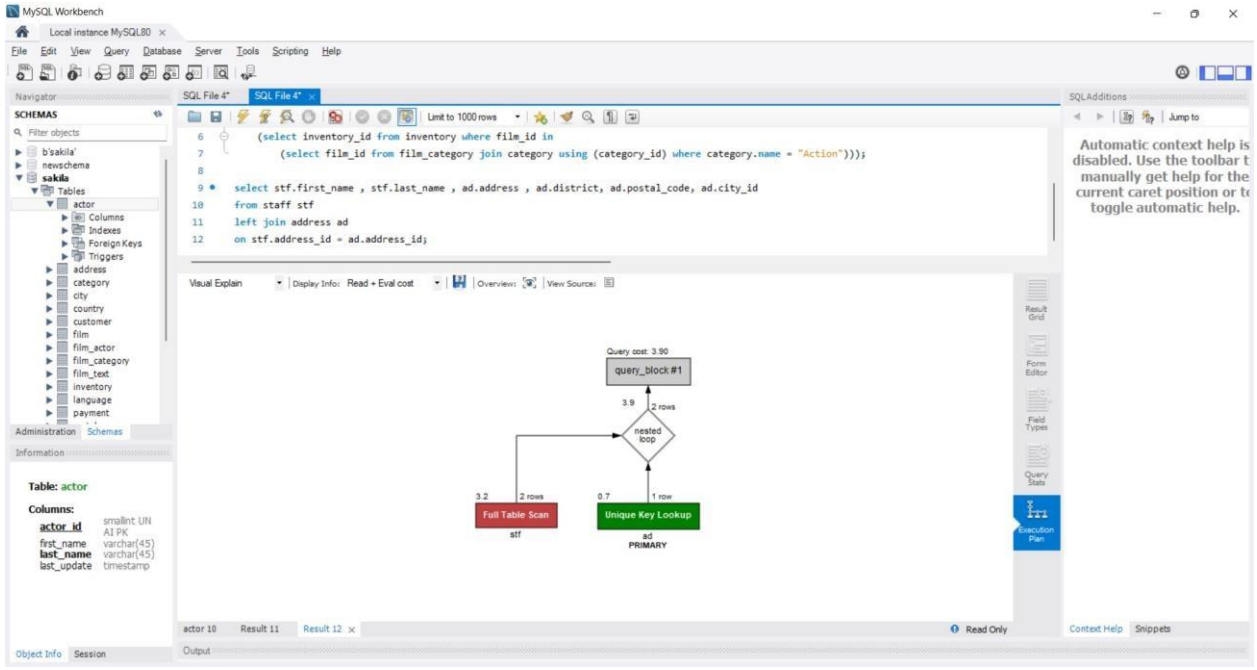


3) LEFT JOIN



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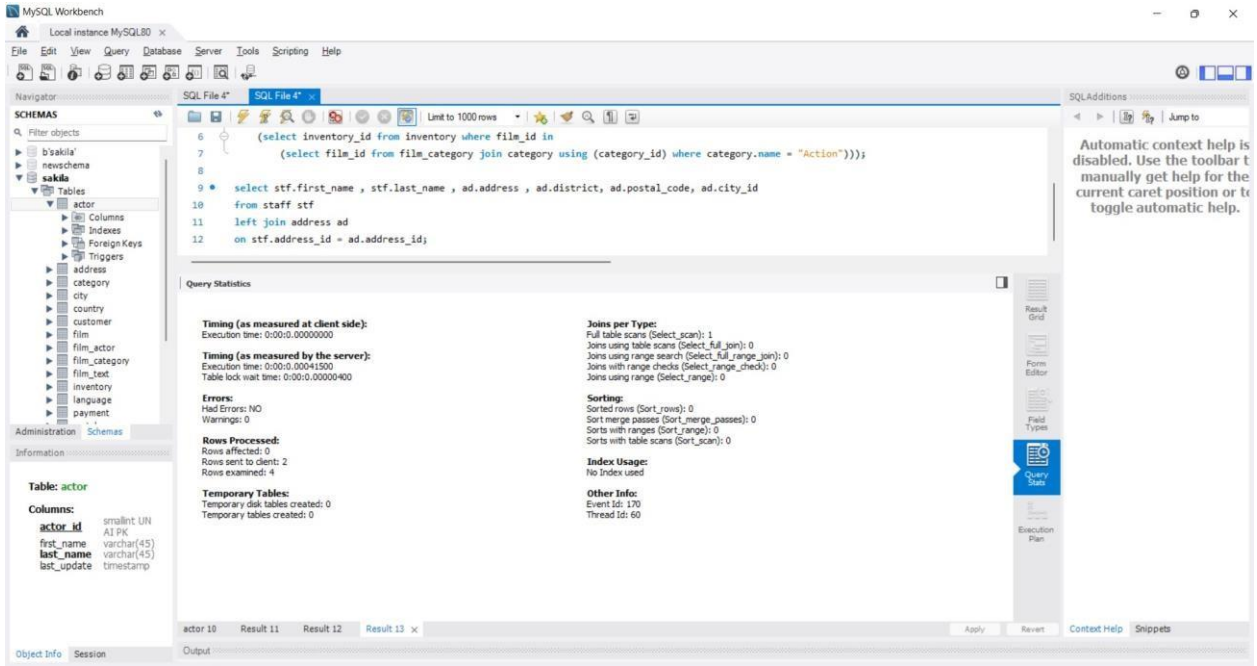

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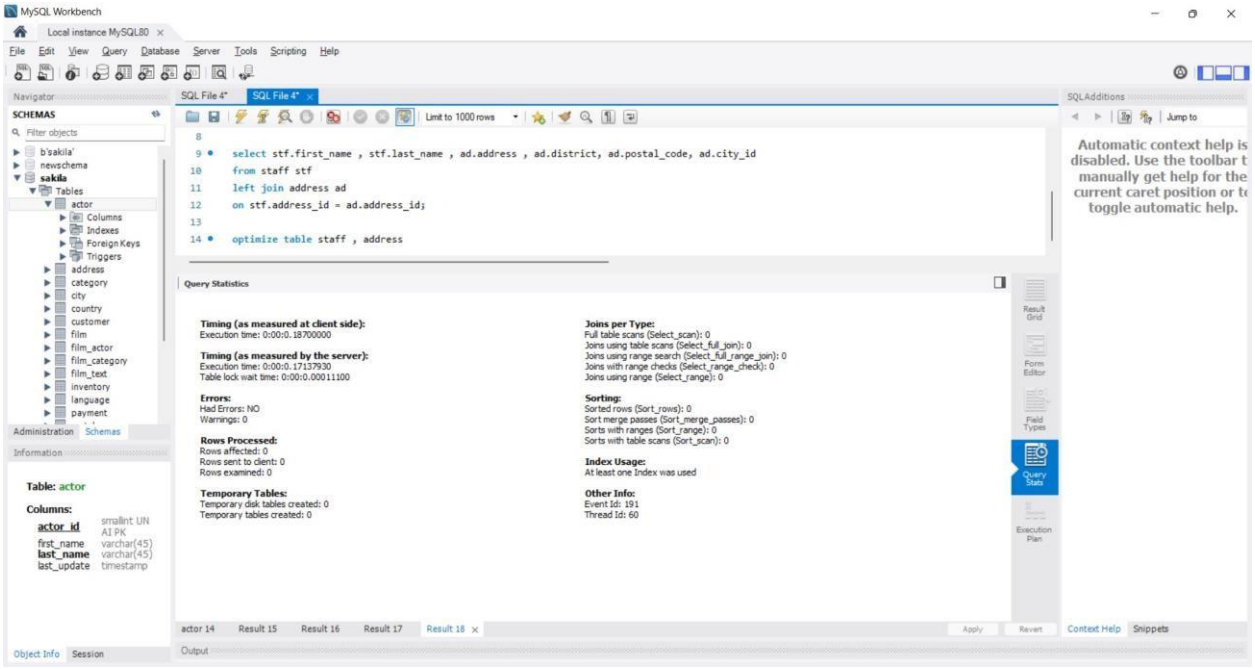

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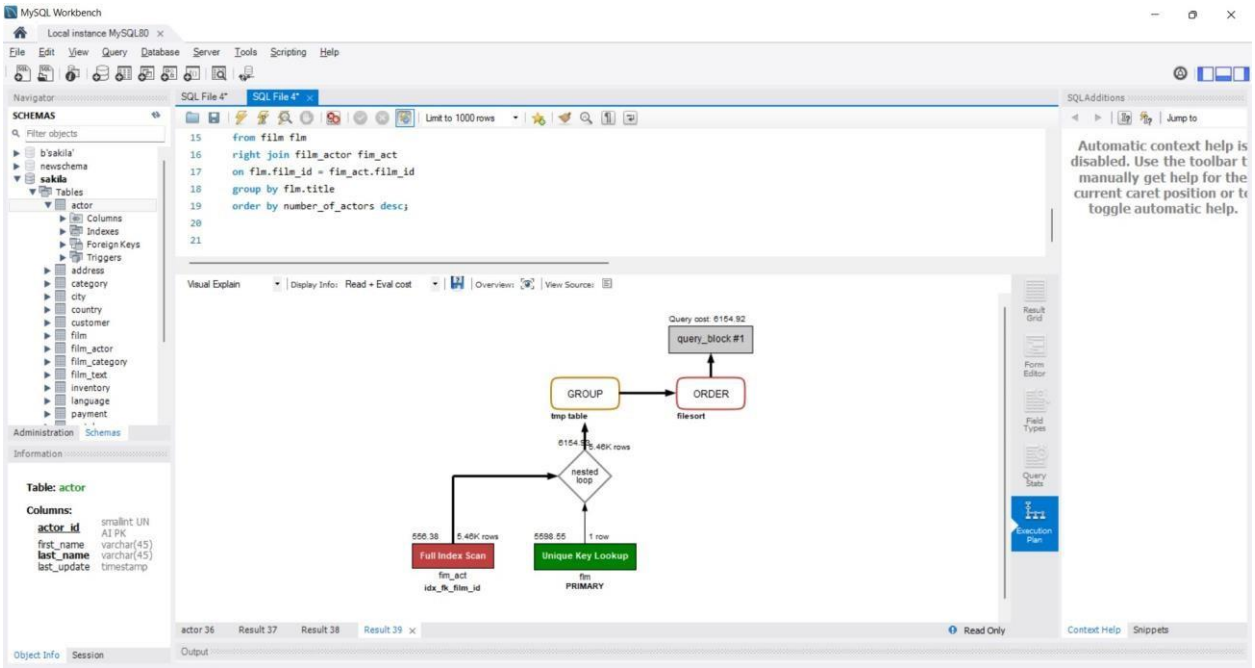

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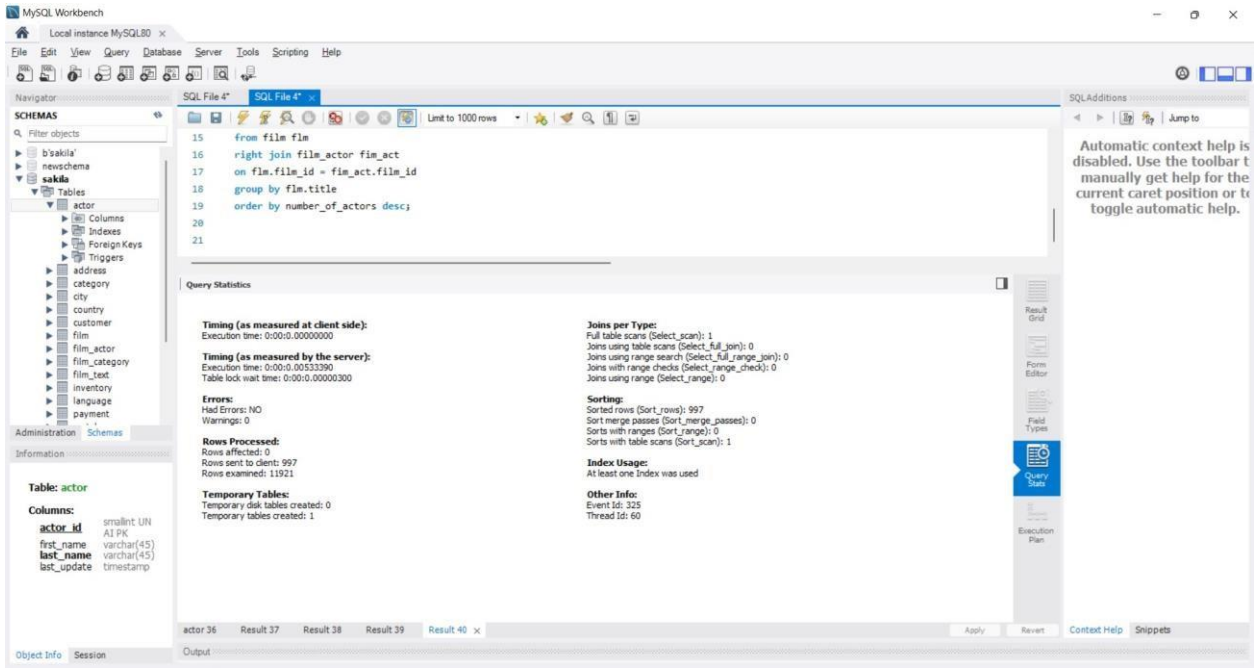

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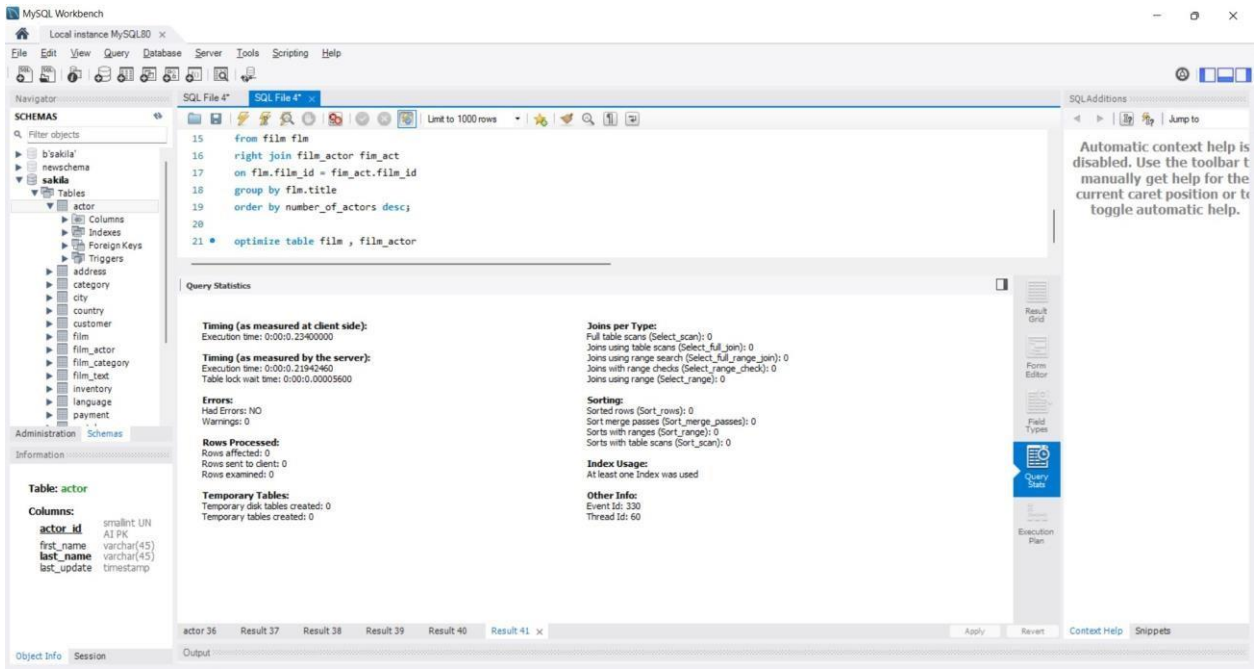
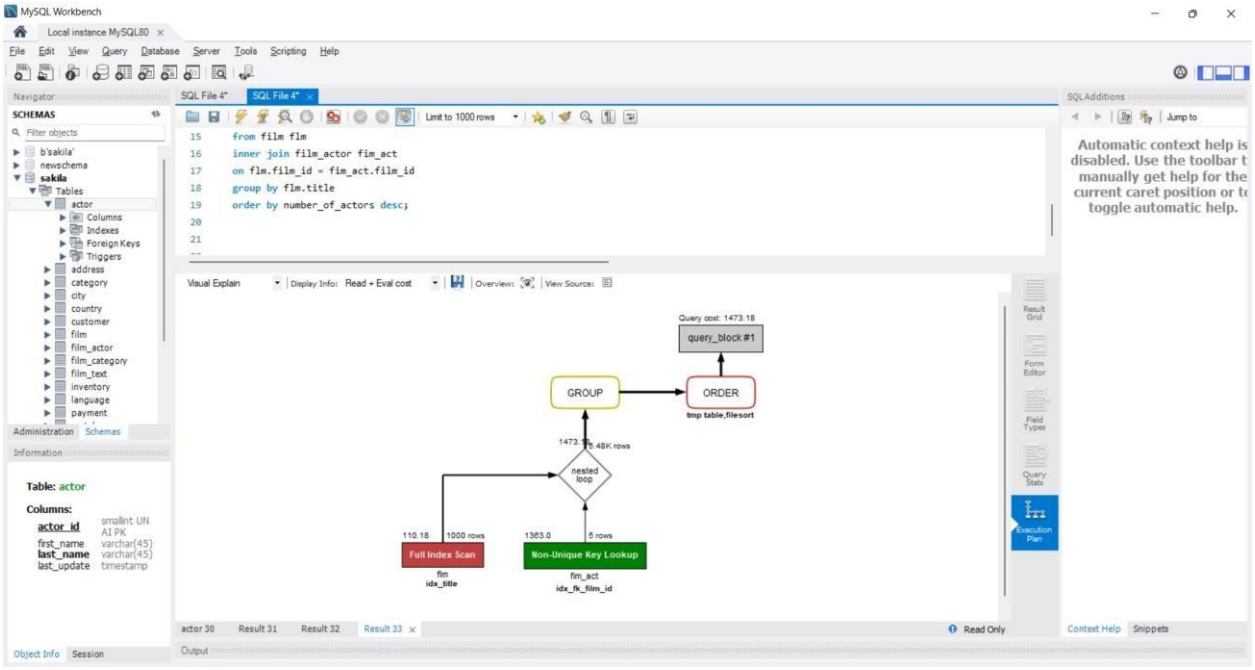


5) INNER JOIN



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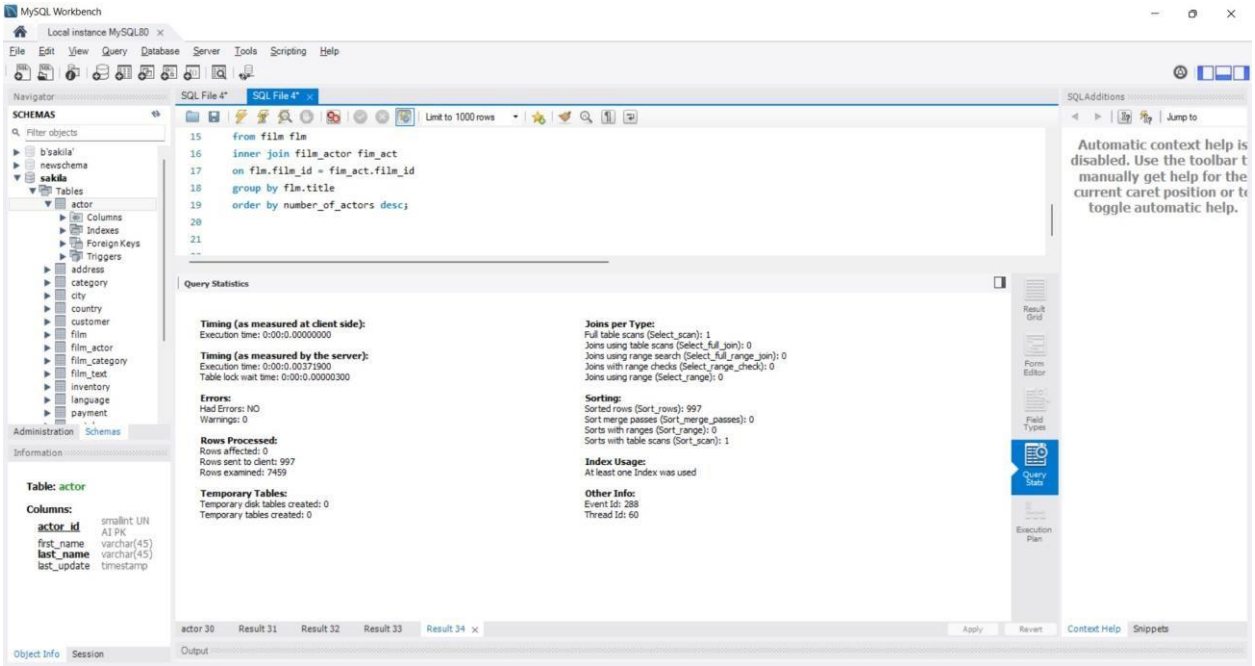

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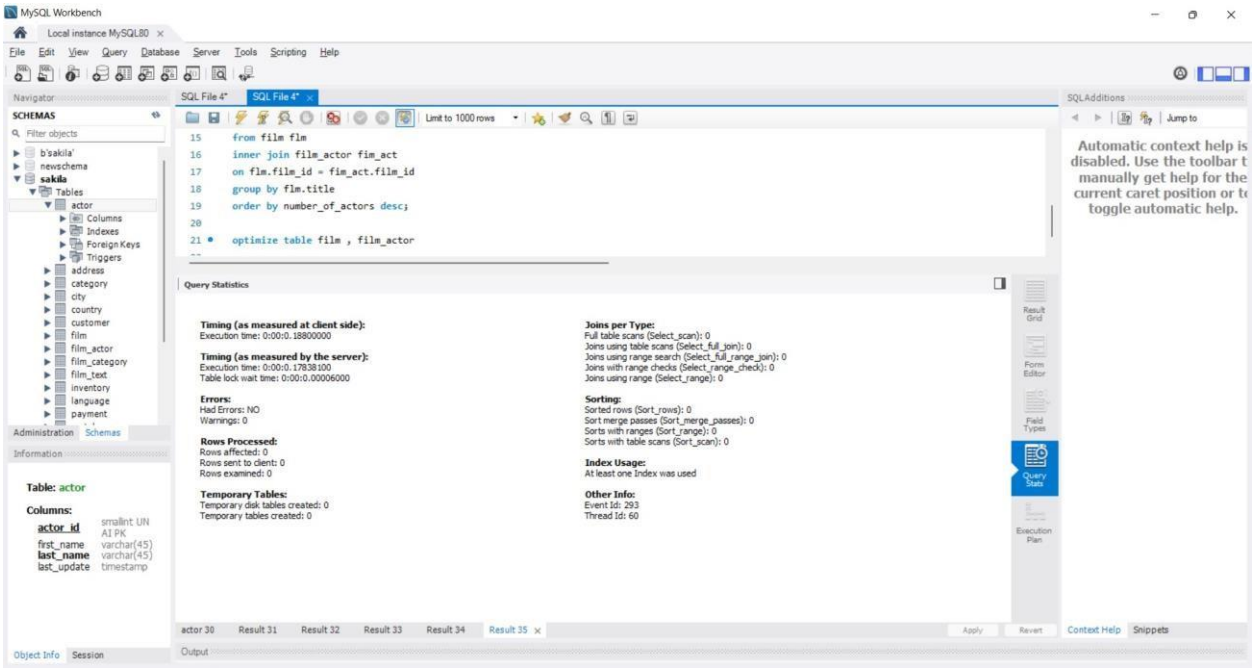
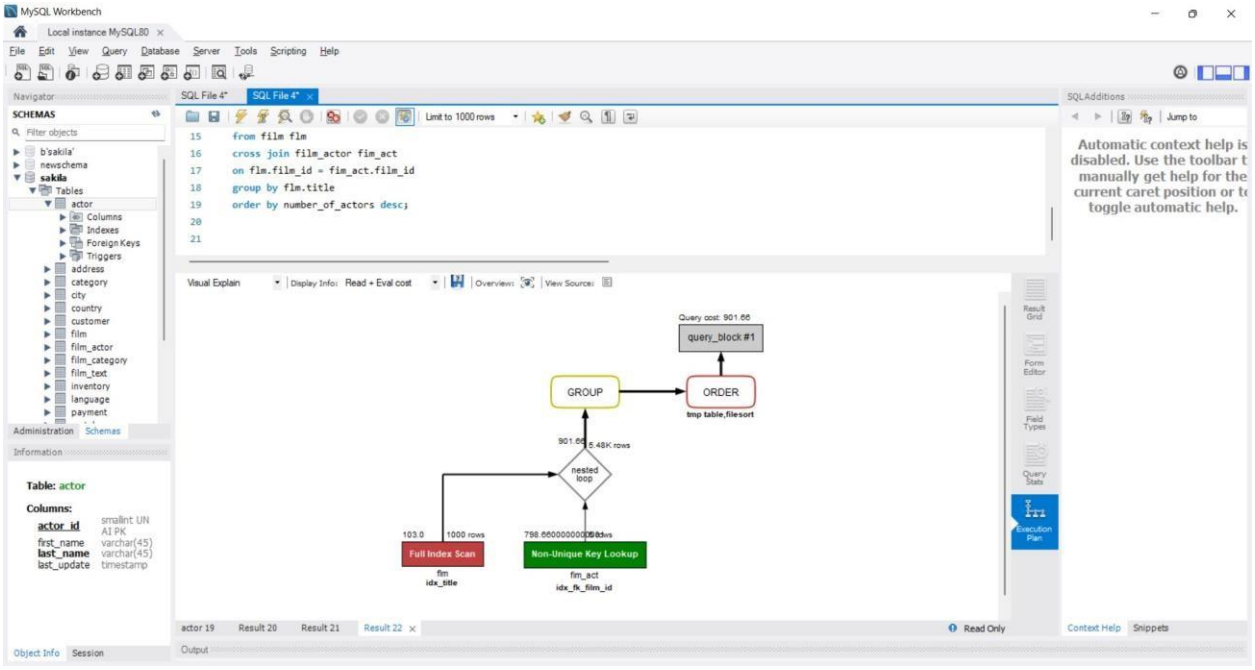


6) CROSS JOIN



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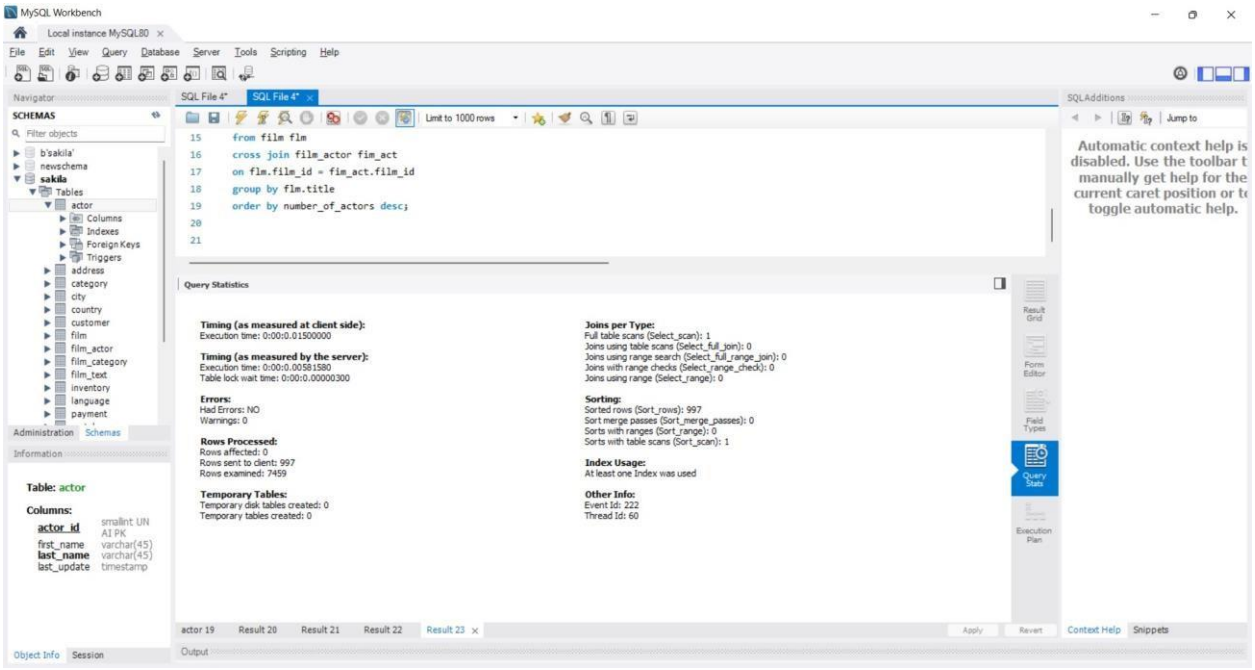

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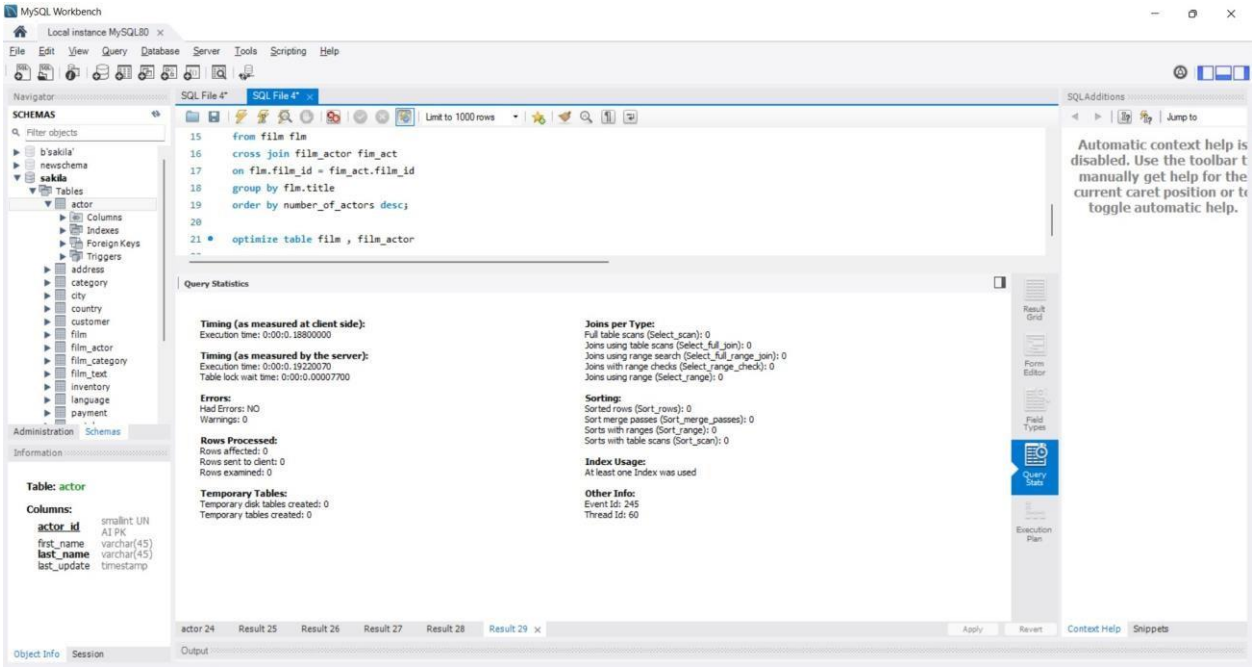
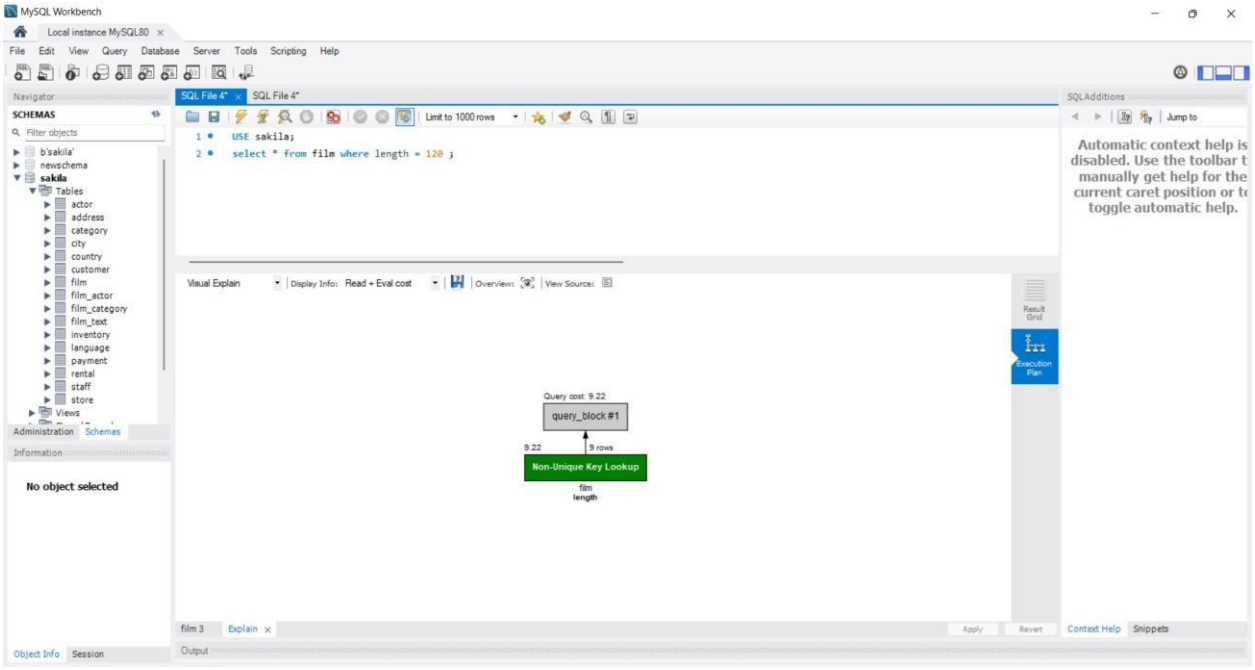


USING INDEXING

1)SIMPLE QUERY



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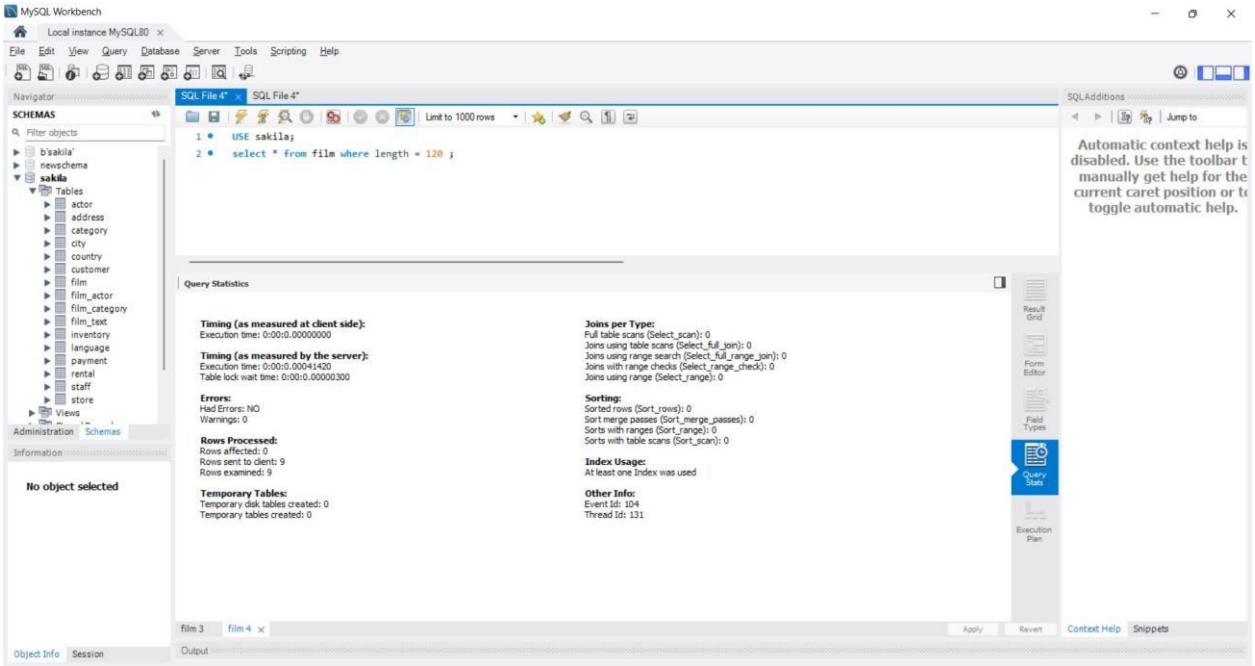

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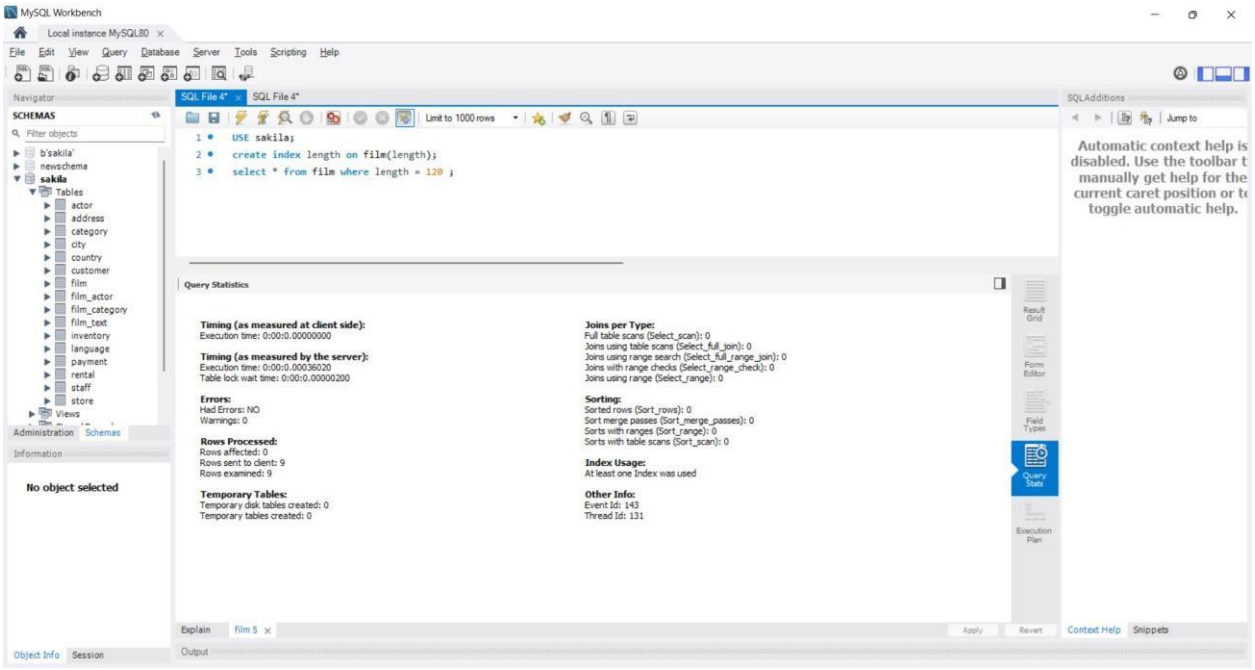

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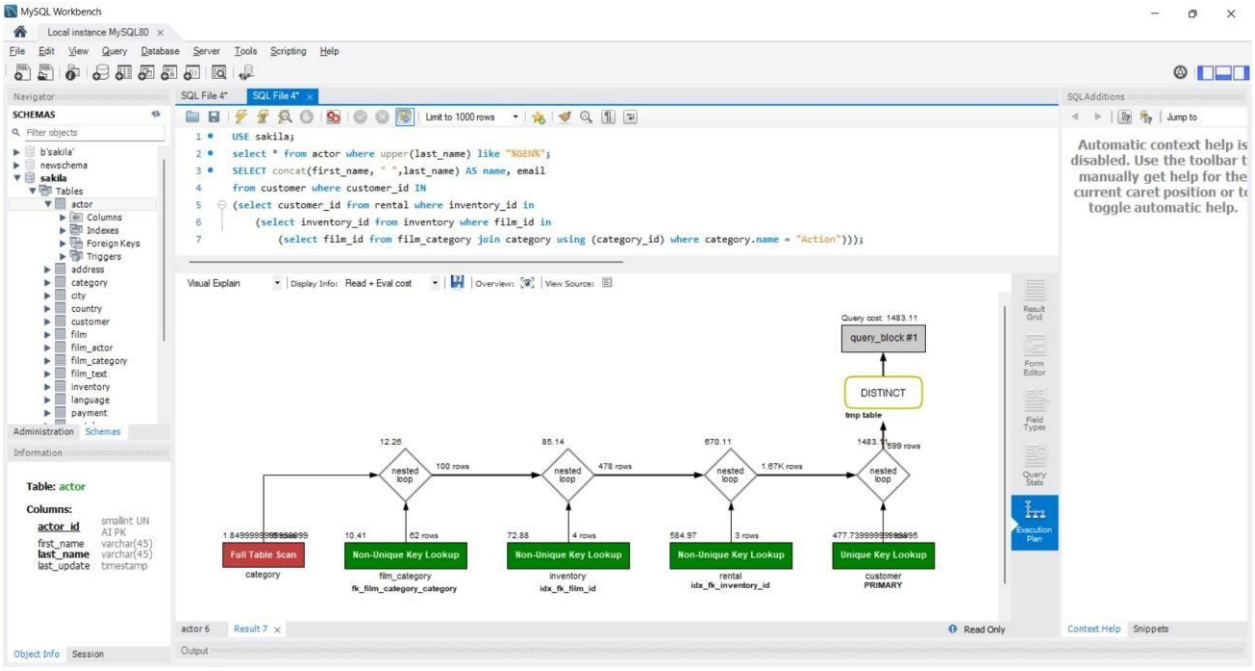

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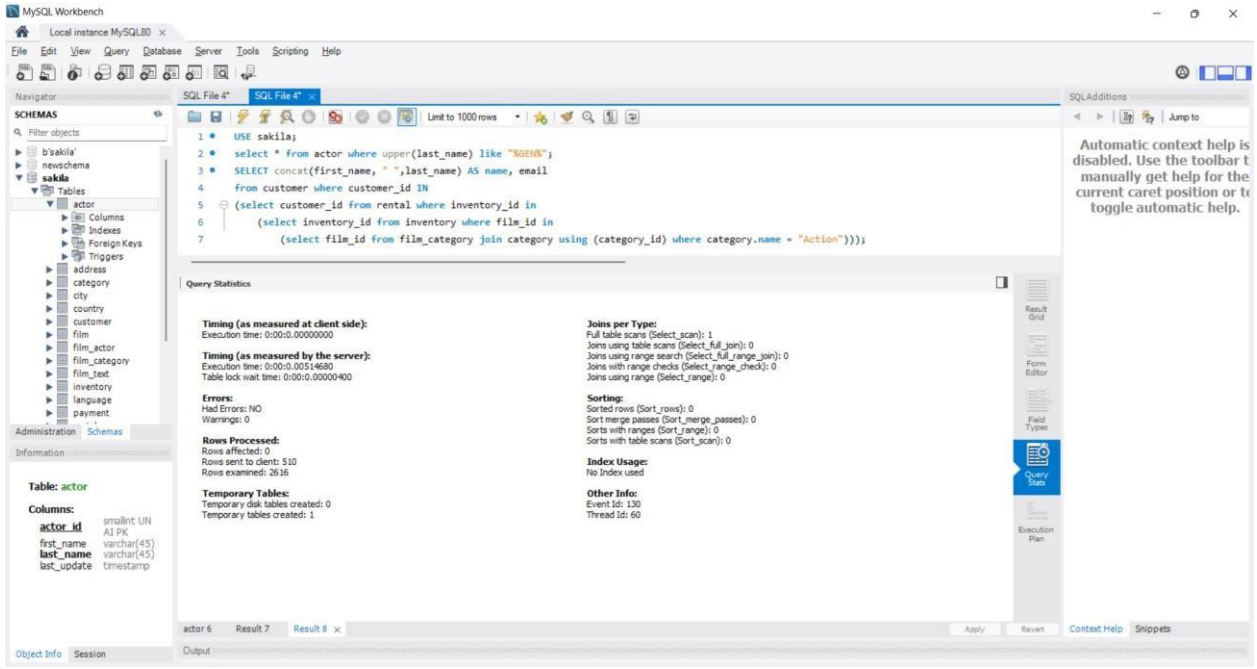

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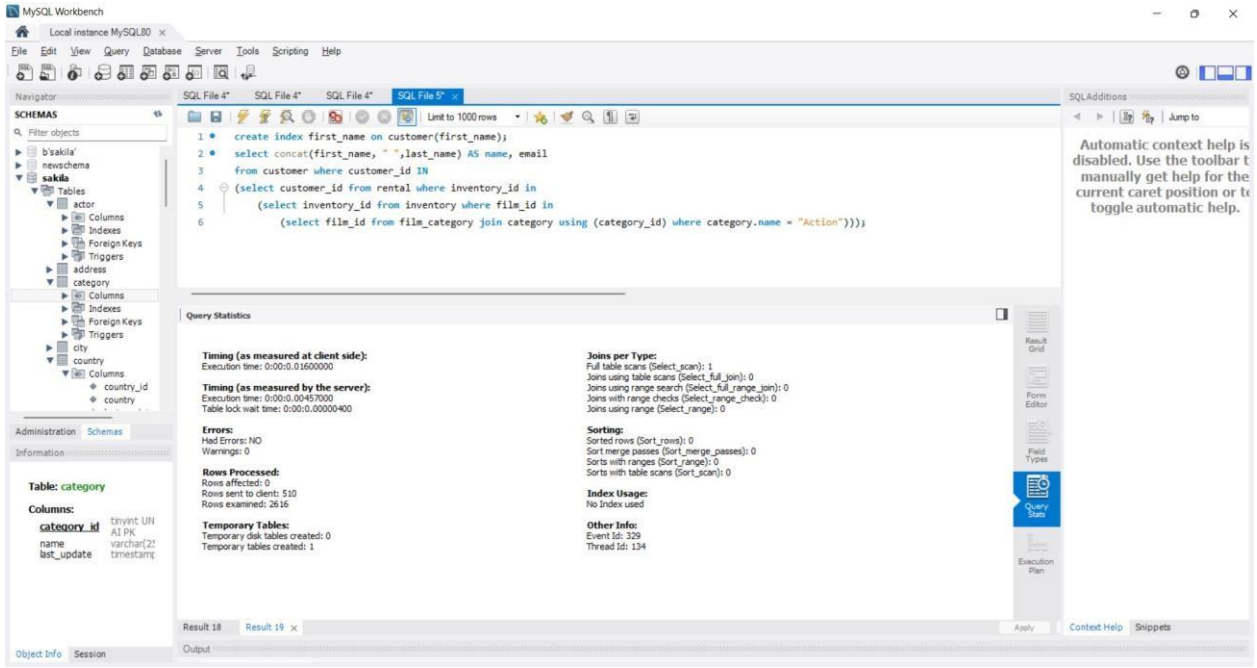
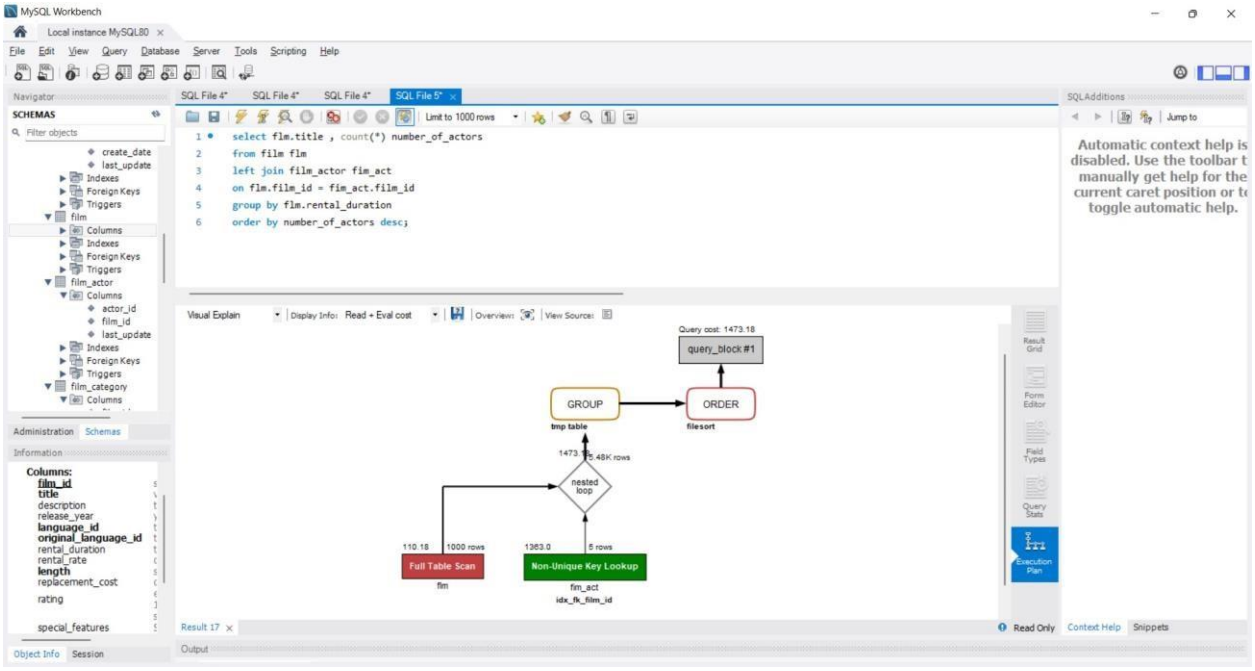


3) LEFT JOIN



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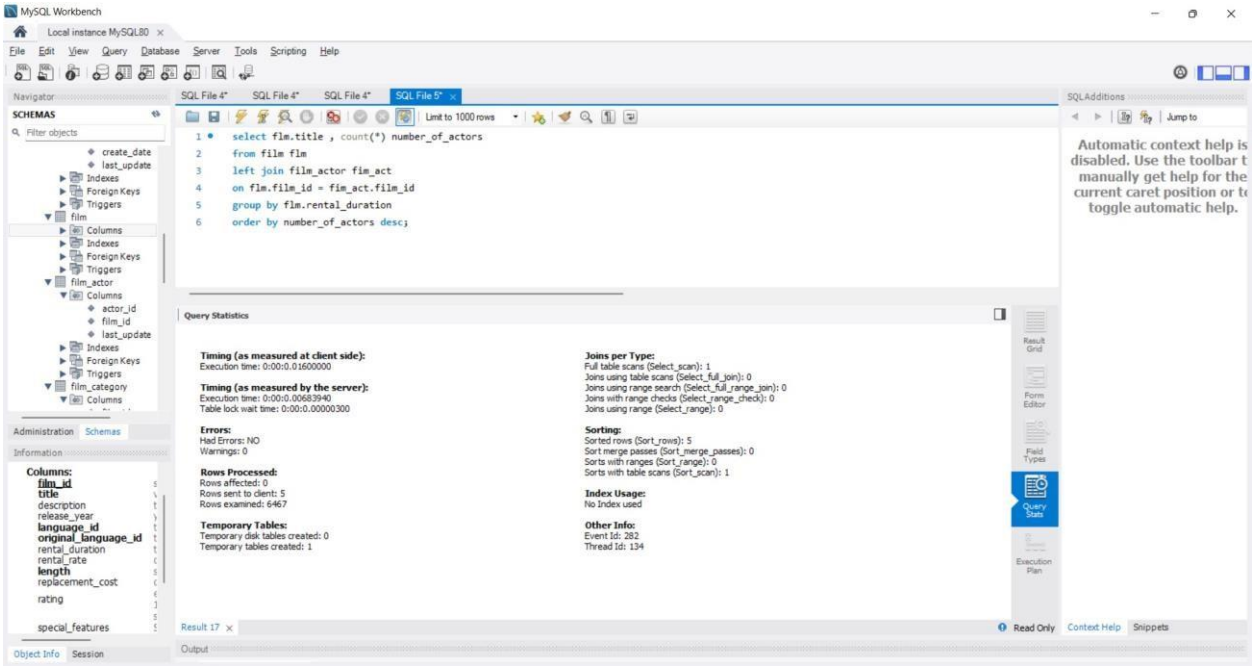

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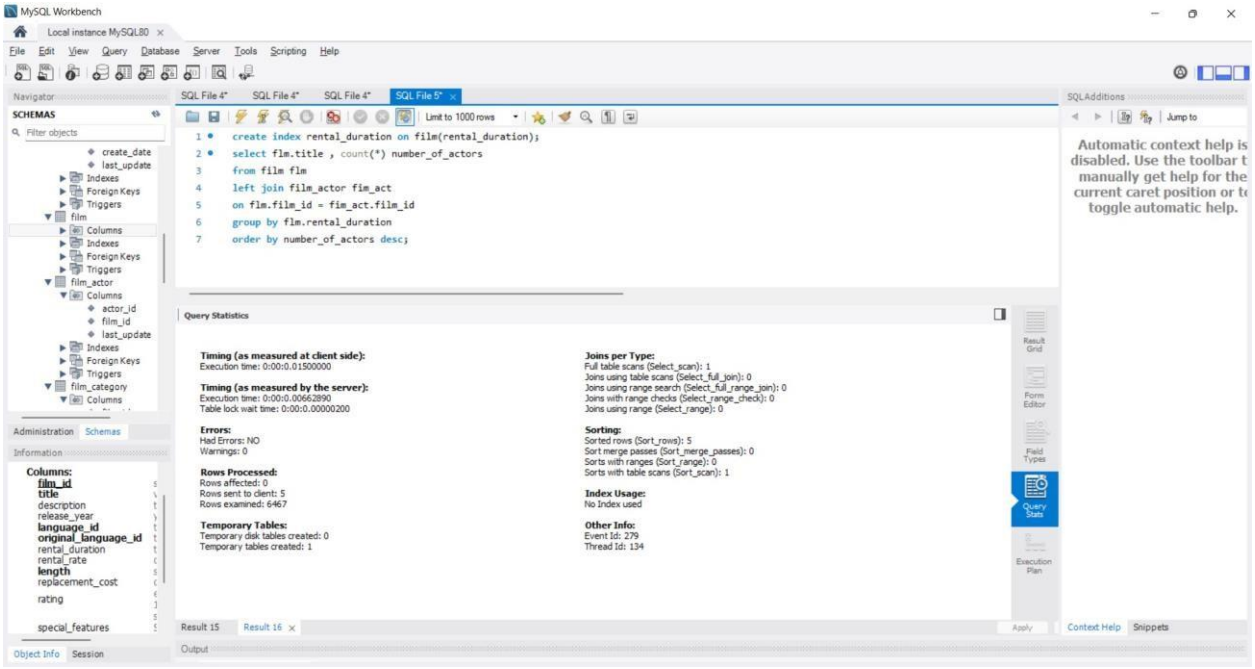
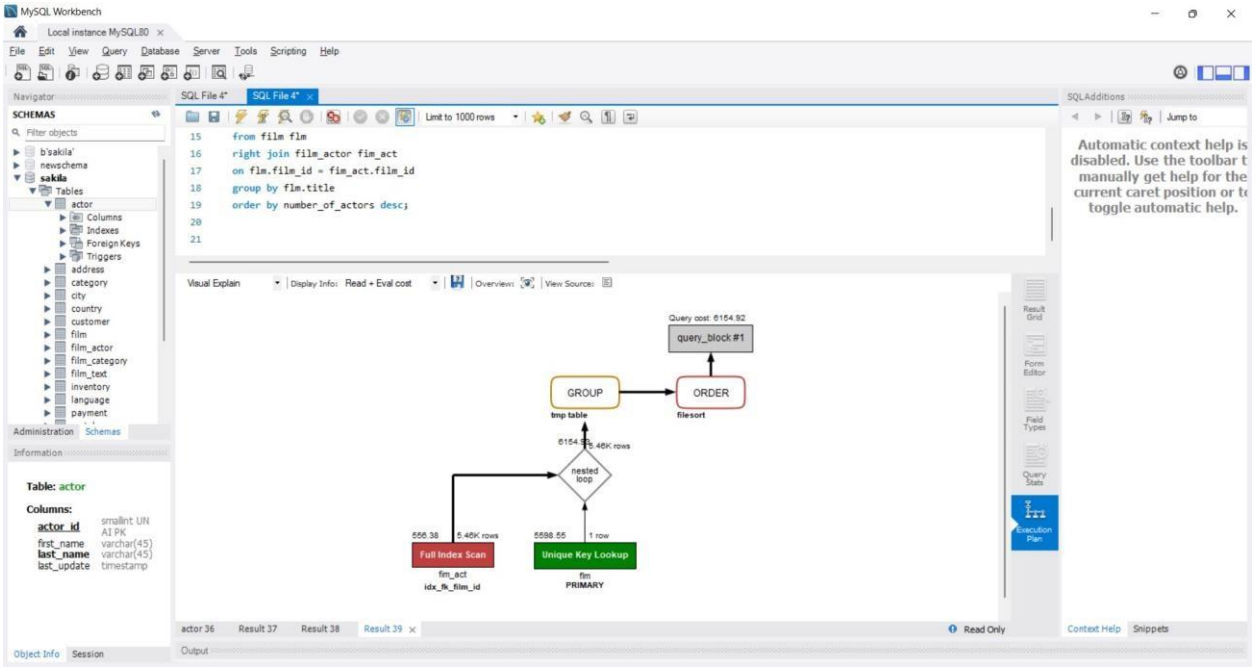


4) RIGHT JOIN



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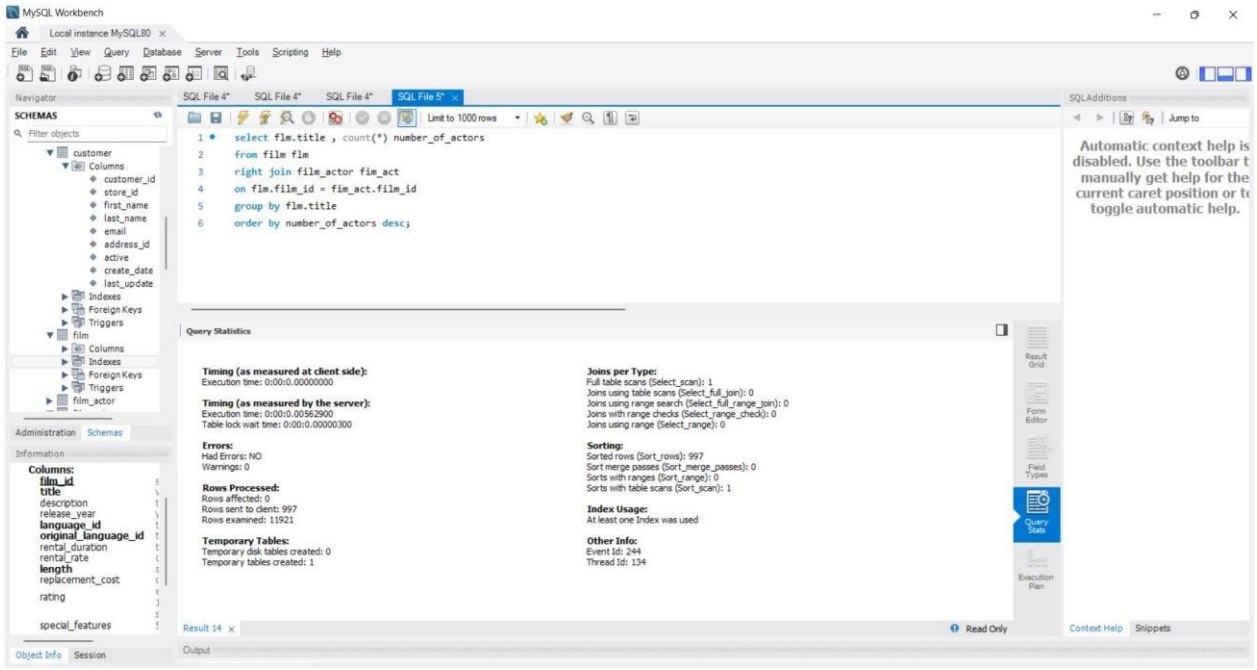
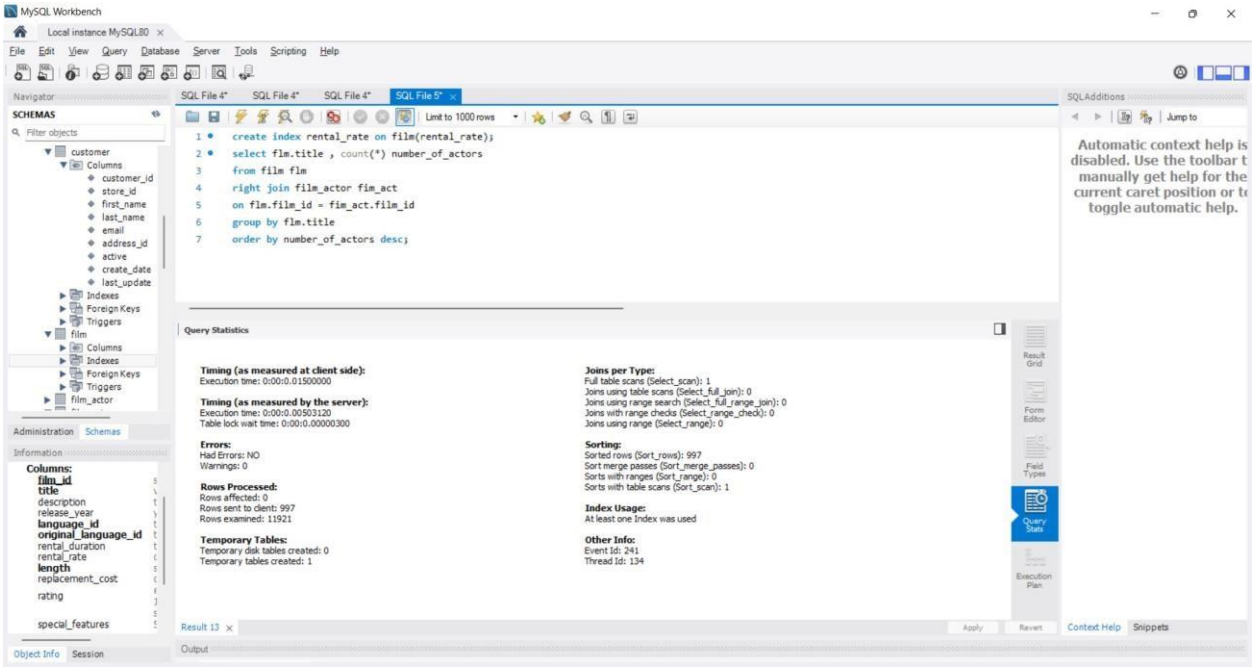
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