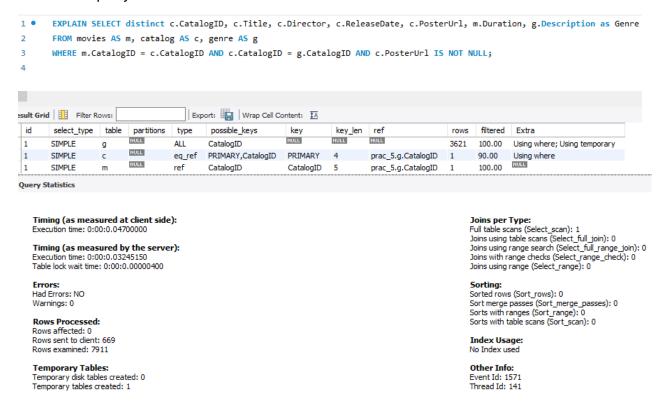
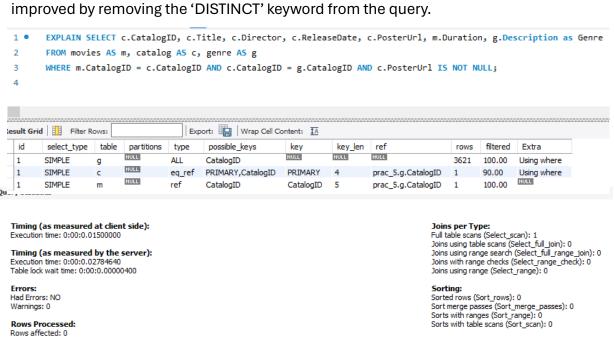
## The below query is used to retrieve information about the different movies:



According to the above query statistics analysis Execution time measured at client side is 0.047 seconds and the Execution time measured by the server is 0.03245150 seconds. One temporary table is created, meaning that the intermediate results are stored temporarily, which can slow down the performance. The temporary table is created due to the 'DISTINCT' keyword, which eliminates duplicate rows, causing additional overhead. The 'DISTINCT' keyword was used due to our initial dataset containing duplicate values; however, all our data must be unique therefore after deleting all duplicate values in our dataset we can see that optimization can be improved by removing the 'DISTINCT' keyword from the query.



Index Usage:

No Index used

Other Info: Event Id: 1510 Thread Id: 141

Rows sent to client: 669

**Temporary Tables:** Temporary disk tables created: 0 Temporary tables created: 0

Rows examined: 7911

After optimising our query by removing the 'DISTINCT' keyword, we can observe the following performance gains achieved:

Execution time has decreased as the overhead (sorting and comparing rows) associated with removing duplicate values has been eliminated.

- Execution time measured at client side reduced from 0.047 seconds to 0.015 seconds.
- Execution time measured by the server reduced from 0.03245150 seconds to 0.02784640 seconds.

No temporary table was created as there is no need for a temporary table to store intermediate results associated with finding duplicate values.

- Leading to faster execution and better performance.

\*side note: it is confirmed that there are no duplicate values contained in the dataset as the number of rows sent to the client remained the same, hence no need for the 'DISTINCT' keyword.