1: Without indexing

A diagram of a table

Description automatically generated

2: With indexing

A diagram of a computer program

Description automatically generated

3:

The query cost of with indexing is much lower than without indexing, especially when there are so many rows to start, and you are selecting only 1 row that satisfies the requirement.

4:

A diagram of a table scan

Description automatically generated(48.07k rows)

5:

A diagram of a table

Description automatically generated

6:

With indexing on the strings, it changed from executing a full table scan to only an index range scan. It reduced the rows from 48.07k rows to only 10 rows.