Advanced Databases
INZ000109P
Project

Assignment 5 - Query plans (spec.)

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➔ QUERY PLAN FOR 1. QUERY
- Most Costly Operations Are:
  - Changeable process is solving Nested Joins and accessing all columns of tables.
  - Also sorting has a big cost.

In this query, there are a few multiple joins and for this reason it created complex meaning. If we change the join type (FULL OUTER JOIN TO INNER JOIN), it will be more effective query. Also, in subqueries, every column returns to outer query and it is calling wasted data. In addition, while searching data in this query , there are some “String search” and that makes execution time slow because searching string is so difficult. To avoid this problem we can create a table which includes keys to connect table each other and remove searching string part. In this way, we can solve this complexity and write a more understandable query without joining too many tables and with some basic criteria.

➔ QUERY PLAN FOR 2. QUERY
- Most Costly Operations Are:
  - Sorting has a most cost on this query.(GROUP BY)
  - Accessing all of the columns of joined tables have a big cost.

First plan is, we should change the join type. Full outer join is to much time consuming and we do not need this place. Also, this query has string search, and it takes too much time.

➔ QUERY PLAN FOR 3. QUERY
- Most Costly Operations Are:
  - Sorting has a most cost on this query.(GROUP BY)
  - There are a lot of full outer joins and it causes big cost number.

In this query, there are lots of multiple full outer joins and for this reason it created complex meaning, we should change the full outers. In addition, while searching data in this query , there are some “String search” and that makes execution time slow because searching string is so difficult. To avoid this problem, we can create a table which includes keys to connect table each other and remove searching string part. In this way, we can solve this complexity and write a more understandable query without joining too many tables and with some basic criteria.

➔ QUERY PLAN FOR 4. QUERY

- Most Costly Operations Are:
  - Accessing tables because there is a lot of joins and the are nested.
  - There are a lot of full outer joins and it causes big cost number.
  - View is the most costly operation

In this query, there are also lots of multiple joins , subqueries, checking string in tables. We should change join types and LIKE to some more evident input. Because of this complexity our subqueries cannot return 1 row and that is why we need to use ‘fetch’ command to choose first row of the selected table. Using fetch command is easy but because of complexity. So, to make execution time good, we can create common table and maybe separate columns of table to write down understandable subqueries. In this way, we may not use ‘fetch’ command. Those things make our queries better and understandable.

➔ QUERY PLAN FOR 5. QUERY

- Most Costly Operations Are:
  - Accessing tables because there is a lot of joins and they all of it are full outer. It takes a lot of unnecessary data.
  - View is the most costly operation

There are lots of full outer join and it increases the elapsed time. When we change it, it will be more effective .

➔ QUERY PLAN FOR 6. QUERY

- Most Costly Operations Are:
  - Accessing tables is the costliest operation like other update queries. Because there is a lot of joins.
  - View is the most costly operation

This query has a lot of subqueries, if we create a common table, we can access it more easily. , maybe most of table have connected each other and also some subqueries

with checking of string. Actually, subqueries are normal and they don't need to initialize but there are so much joining and string search (searching date because date is different format). In this time creating common table to connect each tables and also changing the data type of value which needs string research can make execution time good.

➔ QUERY PLAN FOR 7. QUERY

In this query , there is a deletion and this happens with some subqueries, joining and as using command 'LIKE'. This command looks strings and difficult to search on table. Maybe improvement of this part of query can makes execution time good. Like searching another thing like number.