Big Data Infrastructures

Query Optimization

Complete the following tasks and hand in screenshots from Postgres.

A. Download the sample *dvdrental database* from ILIAS: *"/Labs/2_Query Optimization/dvdrental.zip"* and load it into Postgres.

B. Examine the *access path selections* in query plans, by doing the following:

   i. Write a sql query to select all columns from **table rental** whose customer_id is 459.

   ii. Write a sql query to select all columns from **table country** for the country Switzerland.

   iii. Examine the plans for queries (i) and (ii) using the EXPLAIN command.

   iv. Create an index in table *rental* for column customer_id.

   v. Create an index in table *country* for column country.

   vi. Re-examine the plans for queries (i) and (ii). Explain the difference.

C. Using tables **payment** and **staff**, do the following:

   i. Write a sql query to return the number of payments done by staff member whose first name is 'Mike'

   ii. Examine the plan for query (i) using the EXPLAIN command.

   iii. Draw the physical plan for query (i). Indicate the operators, order of execution and implementation algorithms.

Contact me if you have any questions. (rana@exascale.info).