Report

Subject: PowerAMC, Auto Generated SQL Script.

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Github Repository: https://github.com/IsmailBourbie/master-one-practical-work/tree/master/db_dm/TP1

Design of the System:

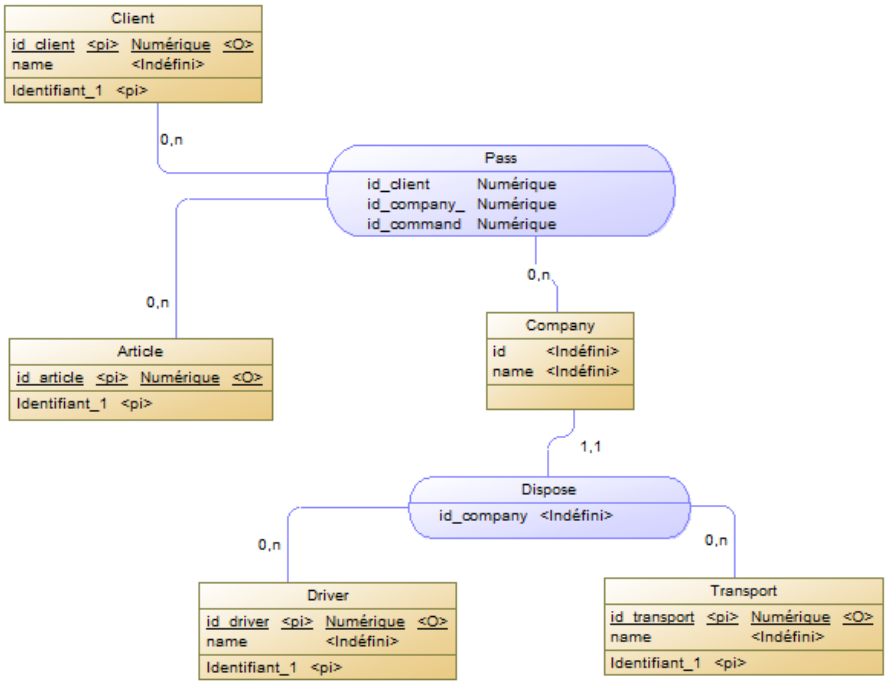
As discussed in the course, the design process of the database plays an important role in the database life-cycle, we made the three phases of design which consist of:

1. Conceptual Design
2. Logical Design
3. Physical Design

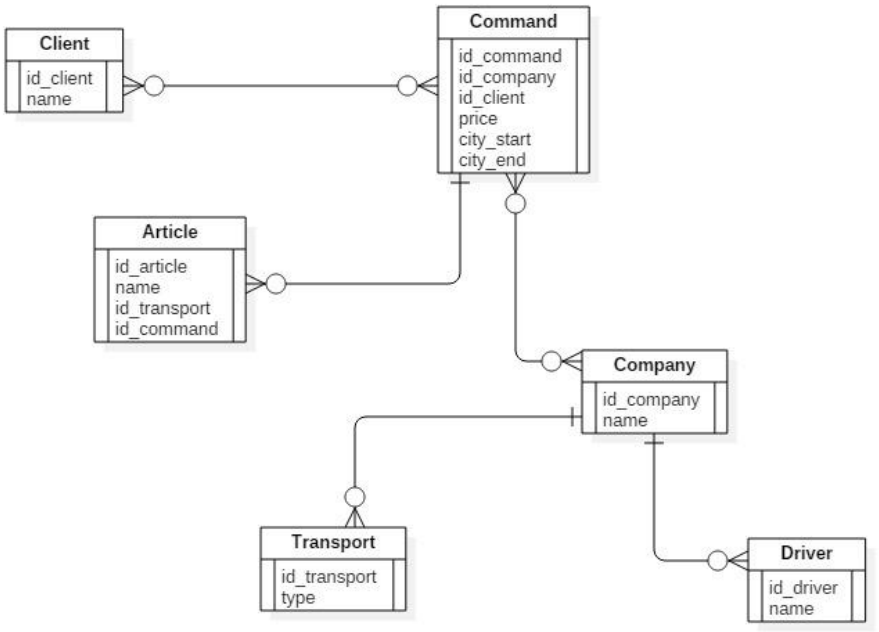
Conceptual:

The conceptual design was made using the two well-known models (ER and MCD) and here are the diagrams:

MCD:



ER:



Logical:

The following relations describe our logical model.

- Client (id_client, name).
- Company (id_company, name).
- Command (id_command, #id_company, #id_client, price, city_start, city_end)
- Article (id_article, name, #id_transport, #id_command)
- Driver (id_driver, name, #id_company)
- Transport (id_driver, name, #id_company)

Physical:

In The Physical Design, we generate creation queries using PowerAMC, but we modify them because I don't trust a software for writing our queries: D.

The queries can be found at Github in this link.

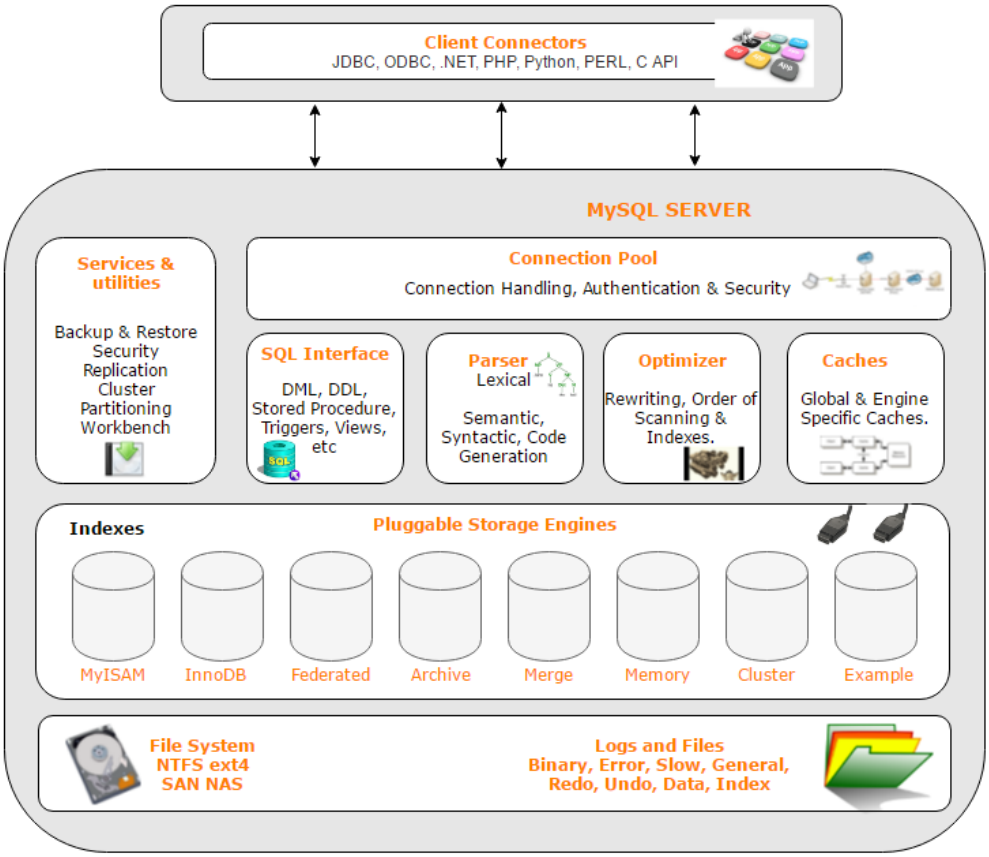
https://github.com/IsmailBourbie/master-one-practical-work/blob/master/db_dm/TP1/Database-Queries.sql

Deployment:

In this phase we choose MySQL as a DBMS (Database management system) for our system, there are a lot of benefits using MySQL, we choose the following:

- MySQL allows multiple users to access to a variety of databases.
- Applications including Joomla, WordPress and Drupal all use MySQL, as do many of today's most successful organizations such as Nokia, Google, Facebook, YouTube, and more.
- MySQL can handle a multitude of data in a fast and reliable manner
- MySQL can also be easily managed using visual web tools such as phpMyAdmin just to give beginners that extra bit of help!
- And Finally Its SQL interpreter, Management components, GUI database viewers, stored procedures, cross-platform support, multiple CPU usage, client server system, session monitoring tools all help you to work and receive data in an efficient, stable and organized manner.

The architecture of MySQL can be described in the diagram below:



In this practical work we've made a Client/Server (Web Client and Restful Server) Architecture in two separate real machines and here is some screenshot of the system. The Screenshot of the project can be found on this Github link:

https://github.com/IsmailBourbie/master-one-practical-work/tree/master/db_dm/TP1/screenshots

Conclusion:

The Process of Designing the database is really very important in the Lifecycle of a database because it enables such greats things before making a real database, we think that all the hard work must be done in this phase, because the phase of deployment can be done easily if you did the right job in the phase before, it's just a matter of choosing which DBMS and which hardware to use.