MacGyvers

RETURNS

Group 6

MROB, MROF, MILAR, JEGP, CSTP

TO BE HANDED IN:

A graphical presentation of the (possibly revised) E-R model. Comment on changes made since hand-in 1

See “Final Model.png”

• An updated schema, written in SQL, corresponding to the E-R model. Also hand in the SQL commands used to transfer data to your schema.

See “CreateStatements.sql” for the schema written in SQL
See “InsertStatements.sql” for the statements transferring data from the IMDB data set to our schema

persons, roles, posTypes, productions, genres and prodTypes all have artificial primary keys. The functional dependencies of all of these are unavoidable since they fulfil:
{a1,a2,..,an}} ->{b1,b2,...,bm} where the left side of the FD is a key.

Our design is currently in BCNF because we’ve made sure that all our functional dependencies has a superkey on the left hand side.

There is one place in the current schema design, where we might get a performance gain by reducing the number of tables, without decomposing the schema away from BCNF. This is the case with the following the <posTypes> relation, where the name of the position type could be stored as an attribute in the <positions> relation. In addition to a performance gain, the change would most likely make the queries simpler in most cases.

• SQL for at least 15 of the queries described above. Unless a query is selfexplanatory, give a short explanation of its correctness.

see “Queries.sql”

• A list of the indexes created (not including indexes automatically built on primary keys). Report timings of all your SQL queries before and after index creation. (You may have to run each query twice to ensure that the relevant parts of the index and relation are in RAM – use the time for the second run.)

see “Queries.sql”

• A transcript of a database terminal session running all queries in MySQL on the loaded data set, and also showing query plans (using EXPLAIN). Discuss how the observed behavior fits with your understanding of indexes.

For explanation of indexes see “Queries.sql”
For transcript see “QueryOutput.txt”