Notes about Stage 2

(5%) Questionnaire

(5%) SQL File Import

- The DBMS must allow the user to **import** an SQL text file and execute it (the file extension will be ".sql").
- If a file contains more than one SQL statement, each statement will be separated by a semicolon ';' at the end of the statement.
- All statements in an SQL file must be executed.
- The system must support the insertion of at least 1,000 tuples in each table.

(20%) SQL Queries

- The DBMS must support the **<u>SQL SELECT</u>** statement
  - The system must allow SQL SELECT from **<u>up to 10 attributes in a table</u>**.
  - The '*' symbol must be supported, which indicates that **all** attributes from the table (or tables) in the FROM clause will be obtained.
  - The system must support SELECT queries from **<u>up to 2 tables simultaneously.</u>**
    - For this case, attribute prefixes and table aliases must also be supported.
    - For table aliases, the "AS" restricted word must be written between the table name and the alias in the FROM clause.
    - A table alias can be used as a prefix for an attribute (e.g. D.name).
    - If a table alias is not used and there is an ambiguous attribute between two tables (e.g. both the Student and Department tables have an attribute called "name"), then the table name has to be used as a prefix in the attribute (e.g. Student.name and Department.name).
    - A single SQL query can have a combination of table name prefixes, alias prefixes and no prefixes at all. Only attributes that are not ambiguous do not need a prefix (e.g. the attribute "studentId" only appears in the Student table)
- The DBMS must support the **<u>WHERE</u>** clause in SQL queries.
  - The WHERE clause must support up to two Boolean expressions composed of one of the following logical operators:
    - '=': equals
    - '<>': is not equal to
    - '<': is less than
    - '>': is greater than
  - Two Boolean expressions can be separated by one of the following: "AND" and "OR".
- The DBMS must support **<u>inner joins</u>** in SQL queries between two tables.
  - Inner joins can be made using a Boolean expression in the WHERE clause, simulating a foreign key constraint.
  - The restricted word "INNER JOIN" is not required, since the joins will be done in the WHERE clause.
  - Inner joins can also be made between a same table (self-reference).

- The DBMS must support **simple aggregation functions** (**COUNT** and **SUM**).
  - The COUNT aggregation function must be supported by the system.
  - The SUM aggregation function must be supported by the system
    - The SUM and COUNT aggregation functions do not require a GROUP BY clause.
    - These two aggregation functions can be made in simple SELECT queries.

—End—