EBU5602 Database Coursework Specification

Teams

This coursework is to be done in groups of 6 students. You should form the teams yourselves via QMPlus, by **Friday, 10 May 2019**).

Statement

Design and implement a relational database for an online shopping website.

Basic requirements for the shopping website database are, it should record customers and products information, as well as purchase/order information and payment information.

You can be creative and come up with your own requirements! (A good starting point is to look at the major online shopping websites' functions.)

Tasks

Tasks include designing, setting up a database schema and providing access methods to this in the form of queries. The steps for doing this include:

- Define detailed requirements that you would like to design your database for.
- Create a conceptual schema in the form of an EER diagram. (Note: you should design your database according to your requirements.)
- Derive a relational schema from the ER diagram.
- *Validate* the relations using normalization technique.
- Implement this schema using SQL.
- Populating the database with a set of typical data. The data should be significant but manageable.
- Create a set of SQL queries and query results, based on your database. (Note: your queries should involve all of your relations.)

Deliverables

Submission by Sunday, 2nd June 2019

Each group should submit a report containing (**one submission by one group member per group** on QMPlus):

- **Description** of detailed requirements and assumptions if you make any. **(3 marks)**
- A conceptual schema of EER diagram (with **explanation** of how the database design supports your requirements). **(4 marks)**
- The relational database schema for your database. You should identify all primary and foreign keys for your relations. You should *validate* your relations using normalization, and <u>explain</u> why they are in 4th Normal Form. **(2 marks)**
- The sample test data. This test data should be carefully designed in order to test that your queries will work under any conditions. **(2 marks)**
- A set of SQL **queries** and **query results**, based on your database. (Note: your queries should make use of all the relations.) **(3 marks)**

Each group should also submit **a zip file** containing your **EER design (.mwb file)** and **a database (.sql file)** (see https://dev.mysql.com/doc/workbench/en/wb-admin-export-import-management.html for exporting database. Note: choose "Export to self-contained file" option).

Assessment

The total coursework counts for 7% of the final mark of the module.