Faculty of Engineering & Built Environment
School of Electrical Engineering and Computing
COMP1140: Database and Information Management

Assignment 1: Mega Pizza Project – Requirement Analysis and Conceptual Design Draft Due in class week 4

WORTH 15% of final course assessment mark.

PART 1: Requirements (69 marks)

- **Data Requirements (**54 marks**):**

  All data elements that have to be captured within the system should be shown, short descriptions of what is stored in each field should be shown. As for the business rules the data elements should be placed in groups (typically these groups will be VERY similar to our entities in the EER).
  The perfect answer would also cross reference the business rules to data elements and groups of elements.
  Should discuss the same entities as in EER, with attributes.

- **Business Rules** (10 marks)

  We will be looking to see that the rules are accurate, complete, understandable (to users/clients not just to IT professionals) and grouped into coherent areas (e.g. rules relating to ordering, rules relating to staff and so on).

- **Transaction Requirements** (5 marks)

  Much the same criterion that exist for the Business Rules, except of course that transactions are the processes that result in changes to data. This means that several business rules could relate to a single transaction and vice-versa. The perfect answer would also cross reference the business rules to transactions.

  It should include reasonable Data Manipulation Operations - basic data manipulation (such as insert/delete for all data types) for all data, and reasonable Queries (at least 6 queries that are related to the operation of the shop)

PART 2: EER Model with Data Dictionary (76 marks)

EER model/diagram (50 marks)

All of the business rules which are express-able in terms of "relationships" must be reflected in the EER.

The student should demonstrate that they understand all of the elements within an EER, including cardinality, keys and foreign keys and use the appropriate entity types/relationships within the diagram (for example entity-sub types where appropriate). Entity names should be meaningful and reflect the business vocabulary rather than using IT terms.

The diagram should be understandable for an IT professional and "explainable" for the client (by "explainable" it means that it should be sufficiently clear that a good IT analyst should be able to sit with the client and explain the various parts of the model in a way that they can understand and improve if there are errors).

And finally the EER should be clearly based on and preferably cross-referenced to the other elements of the user requirements. This cross-referencing is a very important way to verify the completeness and integrity of the EER.

Data dictionary (26 marks)

- Note: the data dictionary should be judged on whether it's derived from your EER. If it is based on your EER (no matter whether the EER is 100% right), full mark should be given
    - Entity types (7 marks)
    - Relationship types (7 marks)
    - Attribute types (12 marks)

Report writing (5 marks)

- For example
- Report presentation
- grammar,
- file names
- image resolution
- make sure all letters and drawings are legible