Faculty of Engineering & Built Environment
School of Electrical Engineering and Computing

COMP1140: Database and Information Management

Assignment 2:

SEEC Resource Access Database Design Project- Logical Database Design

Due: 4 pm, Friday, September 21, 2018

WORTH 10% of final assessment mark

In this assignment, steps in the logical database design are conducted (as described below) as well as revising the requirement analysis and conceptual design of assignment 1, and a report is written.

This assignment has 3 parts as specified below.

1. Revise requirements and EER diagram in Assignment 1, based on:
    i. Either the EER Model submitted for your Assignment 1. Revise it based on feedback provided by your marker, or
    ii. Alternatively, complete the partial EER model given at the end of this file, to meet the systems requirements.
2. Map the EER model to the relational model. Document the relational schema in DBDL (Sample format is given below)

    ISBN (id, number, itemNo)
    Primary Key id
    Alternate Key number
    Foreign Key itemNo **references** Book(itemNo)
    ON UPDATE CASCADE, ON DELETE CASCADE
3. Normalize the schema to Boyce-Codd Normal Form (if any relation is not already in BCNF). The final normalised schema must be documented in DBDL.

The **final report** should include the following:

1. Requirement Specification (including data requirements, transaction requirements and business rules).
2. EER Diagram and Data Dictionary.
3. The relational model mapped from EER (i.e., before normalisation).
4. Normalized Relational Schema in DBDL. In completing the normalisation process, you need first to tell what norm form that each relation is in, give your reasons for making the judgements; then show the normalisation steps for those relations that need to be normalised to BCNF (Note: It is expected that at least 2 cases of normalisation are shown to demonstrate your understanding of normalisation).

Method of submission: Both softcopy submission and hardcopy submission are required:

- zip all required files into one zip file (including the project report, and any files you consider as part of the assignment). The file name MUST be identified by 4

sections: A2, your first name, your surname, and your student number, e.g., A2SimonLee1234567.zip

- It must be submitted to Blackboard -> Assessment -> AssignmentsSubmission-> Assignment 2.
- Print the document, submit the hardcopy by the due time ***to SEEC school office in ICT building***. The hard copy **must** have on the front a **signed** copy of the cover sheet (Assessment Item Cover Sheet – Individual) which is available from: http://www.newcastle.edu.au/__data/assets/pdf_file/0008/75383/AssessmentItemCoverSheet.pdf
- **Note**: **please make sure to fill in your Tutorial Group (i.e., time), Tutor Name,** as well as other items. Otherwise your submission marking may be delayed. It is recommended that you put the same lab session as you put for your assignment 1.

Note: Ten percent of the possible maximum mark for the assessment item will be deducted for each day or part day that the item is late. Weekends count as one day in determining the penalty. Assessment items submitted more than five days after the due date will be awarded zero marks.

Please note:

Zero mark will be given if you donot submit both hardcopy and softcopy.

If your hardcopy submission and softcopy submission are not at the same time, the time of the later submission will be counted as your assignment submission time.

Partial EER: