CMPU2007 Databases I (5 ECTS)

CA Part I 2017/2018

Class group: DT228/2, DT282/2 Lecturer: Deirdre Lawless

Overview

This assignment will take the form of an independent project to complete a database design for a given case study. It will require you to undertake logical and physical data modelling making appropriate decisions about the database design based on a case study specification you have been provided with.

Due date/time

Tuesday 10th October @ 16.00

Marks Achievable

This assignment will be marked out of 100. The result you receive will be weighted in the calculation of your final CA mark to reflect that it counts for 30% of the CA of the module (as marked out of 100% which constitutes 50% of the total module marks).

Instructions

Please read the details of the assignment carefully and ensure you understand what is required both in terms of content and in terms of submission.
Please use your lab classes to get assistance with this assignment and to complete as much of it as possible. Week 8 is review week and the lab class will be allocated to allowing you to complete this part of the CA.

For the case study provided (see file in Webcourses) you are required to complete the following:

- Create a logical/physical data model using ERWin.
- You need to ensure that you have adhered to the following for the ERWin data model you submit:
    - You should include a text box on the canvas the states the following:
        - Your Student Number
        - Your Name
        - Your Programme Code
    - Information engineering notation used;
    - Target database set to Oracle;
    - All entities are named appropriately for the case study e.g. Customer rather than E/1;
    - Entities start with a capital letter, attributes start with a lowercase letter.
    - Appropriate datatypes identified for each attribute.
        - The following datatypes are acceptable CHAR, VARCHAR2, DATE, NUMBER;
        - Where a datatype requires a width/length/precision this should be provided;
        - In the case study you will be provided with specific guidance for some decisions but must use your knowledge and judgement to make others.
    - Primary keys identified for each entity;
    - Foreign keys identified where appropriate;
    - Appropriate NOT NULL, UNIQUE and CHECK constraints are implemented;
    - Name your key constraints, unique and check constraints according to the following conventions:
        - Primary keys: should be named for the entity followed by _PK e.g. Customer_PK
        - Foreign keys: should be named for the two entities involved followed by _PK: e.g. a foreign key between Customer and Order should be Customer_Order_FK
        - Check constraints: should be named for the attribute and the type of check e.g. CHECK_SALEAGE CHECK SALEAGE <10 (in this example CHECK_SALEAGE is the name of the constraint).

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Submission

- You can only submit your CA via the relevant assignment box in Webcourses.
    1. Up to 5 submissions are allowed so if you submit and then identify an error you can resubmit without contacting me.
    2. **NOTE**: Attempts to submit via email will be ignored
- A penalty of 5% will be applied for each day (or part thereof) a submission is late after the original deadline.
    1. **NOTE**: No submissions will be accepted after October 17th @ 16.00 unless personal circumstances exist and you have contacted me in advance to discuss these and request an extension.
- You will need to submit **TWO FILES**
    1. Your model contained in the ERWin file should adhere to the requirements outlined previously named with your student number with the extension .erwin e.g. D1234568.erwin. **NOTE**: The ERWin file should open in the version of ERWin installed on the lab pcs.
    2. A short outline of key decisions you have made in a HTML file named with your student number and the extension .html e.g. D1234568.html. The decisions you need to document are those relating to:
        - Attribute Datatypes
        - Keys (Primary, Foreign, Alternate)
        - Relationships (Logical and Physical)
        - Constraints

DO:

1. Familiarise yourself with the requirements of all aspects of the assessment.
2. Ask for clarification on any aspect that is unclear.
3. Familiarise yourself with what plagiarism is and how you will be expected to behave within the DIT, e.g. DITSU Overview, and to take steps to address any issue of concern related to your submission for this assignment.
4. Adhere to the naming conventions as outlined.
5. Submit as directed.

AVOID:

1. Unfair practice:
    a. This includes using resources, ideas, documentation etc. from the web without acknowledgement.
    b. Using or taking credit for the work of other students in your submission without permission and acknowledgement.

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Marking Scheme

Erwin Model	
Entities correctly identified and named with correct attributes and primary keys selected	15
Attributes correctly identified and named for each entity	15
Datatypes correct for each attribute	10
Correct primary keys identified for each entity	15
Relationships between entities are of correct type with correct cardinality on correct attribute	20
NOT NULL constraints correctly defined	5
UNIQUE constraints correctly defined	5
VALUE constraints correctly defined	5
Keys constraints correctly named	5
VALUE constraints correctly named	5
	100

Penalties

Penalties will be applied for the following:

- Lateness (5% will be applied for each day (or part thereof) a submission is late after the original deadline)
- 5% for an incorrect submission (which includes incorrect mechanism or incorrect naming of files)
- 5% for omitting the required identification details from the canvas