CMPU2007 Databases I (5 ECTS)

CA Phase II 2017-2018

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

Overview

This assignment will take the form of an independent project. It will require you to undertake logical and physical data modelling, implement this model in an Oracle database, populate this with appropriate data, retrieve and update information to support relevant data retrieval requests.

Due date/time

Tuesday 14th November 2017 @ 23:59 * Updated Deadline ****

Marks Achievable

This assignment will be marked out of 100. The result you receive will be weighted to reflect that it counts for 30% of the CA of the module when marked out 100.

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.

Based on the information provided (see file in Webcourses) you are required to complete the following:

- Build the appropriate SQL to create the tables.
    - You can use Erwin to generate the SQL however you need to make sure that in your SQL you name all your key constraints and value constraints (other than NOT NULL).
- Build SQL to demonstrate the value constraints you have created work as intended.
- Build the appropriate SQL to populate the tables with the data provided.
- Build the appropriate SQL to retrieve data according to requirements the case study has for reporting data.
- Appropriately comment your SQL.

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SQL Requirements

You need to ensure that you have adhered to the following for the SQL you submit:

The first four lines of your submission file must state:

- **Your Student Number**
- **Your Name**
- **Your Programme Code**

Creating the Database

Write the SQL needed to Drop and Create the tables as specified in the physical data model provided. Details on the value constraints are provided in the companion case study. In addition make sure you adhere to the following requirements:

- Adhere to the names and datatypes provided in the physical design.
- All constraints (other than NULL OR NOT NULL) must be named and declared at table level.
  - Primary keys should be named for the table followed by pk e.g. customer_pk;
  - Foreign keys should be named for the pair of tables involved followed by fk e.g. tbl1_tbl2_fk;
  - Check constraints should be named so that it is clear what is being checked and end with _chk e.g. cemail_chk.
- Include SQL to demonstrate that all your value constraints work as intended. Hint: try to insert data that violates the constraint.

Populate the Database with Data

Based on the information provided in the companion case study write the insert statements needed to populate the database tables.
Your inserts should include a column list.

Manipulating the Database

Write the SQL needed to product the reports the case study requires.

Explanatory Comments

Include explanatory comments for each relevant section and each relevant SQL statement to explain what aspect of the assignment the SQL relates to, what the SQL is aiming to achieve and how the SQL works.

Submission

You will need to submit **a single SQL file** named with your student number e.g. D1111111.sql.
The SQL should adhere to the requirements outlined previously and should include comments. Files without explanatory comments will not be marked.

Submission Mechanism

Note: Only submit through mechanism listed here – other submissions will be ignored

Submit your single SQL file via the correct assignment box in Webcourses – Continuous Assessment Part II.

Late submission

- A penalty of 5% will be applied for each day a submission is late.
- No submissions will be accepted after **November 21st 2017 @ 23:59. *** Updated ***

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DO:	AVOID:
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.	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

Tables create successfully with columns named correctly and of correct data type	10
Constraints declared at table level, named correctly with SQL to verify constraints work	5
SQL to insert data Correctly Formed and working	10
SQL for Report 1	5
SQL for Report 2	5
SQL for Report 3	5
SQL for Report 4	10
SQL for Report 5	8
SQL for Report 6	12
SQL for Report 7	15
SQL for Report 8	15
	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 file