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| Module | | | | |
| Title Databases 2 | Lecturer Ciarán Kelly | | Class group DT211C/3, DT282/3, DT228/3 | |
| **Assignment** | | | | |
| Name ERD, SQL and PL/SQL | | Worth: 10% of module Estimate of time required: 10 hours | | Due date/time Week 9 Tuesday midnight  9th Nov 2018 |
| Submission mechanism *(Only submit through mechanisms listed here – other submissions will be ignored)*  Webcourses | | Group and individual webcourses submission | | Late submission penalty 10% per week for 1 week. No submissions allowed after that. |
| **ERD (4 OF 10) Group mark:** The group of up to three people should design and submit an ERD for the conceptual schema of their case study. This ERD should be implemented as tables in the group schema (Group schemas will be given out). Each member of the team should understand and agree with every part of the ERD.  From the group schema, grant appropriate privileges to each role in the system. | | | | |
| **TRANSACTION(3 of 10) individual:** This PL/SQL transaction should accept information from the user, manipulate the data in the database and leave it in a consistent state. It should include decision-making and error checking. **Each member of the group will program for a role**. This means they will write an intelligent, decision-making PL/SQL transaction for that role and write SQL as specified below. The transaction and SQL should be run from the member's own account.  Each transaction should be tested for accuracy on the happy path and correct error handling and reporting. | | | | |
| **QUERIES (3 of 10) individual:** Each student should write individual queries that show the following:  Selection, Projection, Aggregation with filters on aggregates, Union, Minus, Difference, Inner Join, Outer Join, Semi-join, Anti-join and Correlated sub-query.  Each query should be tested to ensure that there is data there to satisfy it and to show that it works – i.e. a query that shows the power of the technique being used (e.g. a left join that would return the same as an inner join will not get full marks). You may create views as required but show your code if you do. | | | | |
| **Submission:**   1. Submit a Word document that contains a readable **picture** of your ERD. No marks will be given for unreadable ERDs. Show your thought process while creating your ERD and designing your transactions and queries. 2. Submit 3 x SQL well commented documents:    1. 1 for your CREATEs, INSERTs and GRANTs. This should have been run in the group schema and should be the same for everyone in the group.    2. 1 for your transaction. This is an individual piece of work, which can be run from your REDWOOD schema, using correct and incorrect data entry. It should manipulate the data in your group schema.    3. 1 for your queries. This can also be run from your REDWOOD schema. It should query the data in your group schema. You may need to collaborate with your group to ensure that you have suitable data in the tables. | | | | |