

CIF302 Portfolio Element 4

Object-Relational Databases

This is an individual portfolio exercise. You are expected to complete the following tasks:

During one of the previous tutorials on object-relational databases you have developed part of an object-relational database based on a hospital case study which is given in appendix A. If you had not previously completed this tutorial then it is strongly recommended that you do so before attempting this portfolio element. Using SQL Developer, your tasks for this portfolio element are to:

1. Create an Oracle 10g type that will implement the Staff type. As part of this you are required to write a method which will print staff names as title followed by surname, e.g. 'Dr. Kildare'. Subsequently create a table which will store staff details and insert some rows of data into this table.
2. Create an Oracle 10g type that will implement the Consultation type. To do this will require you to do some investigation into two further object-relational facilities of Oracle, i.e.
 - a. how to use the REF construct (for defining object-references between tables) for relating Consultations to both staff and patients;
 - b. how to use the VARRAY construct for storing lists within a row of data.
3. Subsequently create a table which will store consultation details, and insert some sample rows of data into this table.
4. Develop queries which will demonstrate each of the object-relational features that you have implemented, i.e.
 - a. Use of the method;
 - b. Joining tables by use of object references;
 - c. Displaying the contents of arrays as part of a query.

This element will be part of your final portfolio submission. You will be expected to submit an SQL script file which contains all of the SQL commands as solutions to the above tasks, and a Word document (and an electronic copy saved as an RTF file) which contains copies of output of all the above commands and query output. These will be submitted according to the guidelines given for the whole portfolio.

Marking Scheme

This element will be marked as part of your final portfolio submission. The marking criteria for each element is given in the overall portfolio guidelines. However, this element will be judged according to the given criteria below:

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Name _____

	Weight	Not attempted	Major errors	Minor errors	Correct solution
Task 1: Type created	10%				
Task 1: Method	10%				
Task 1: Table created and relevant data inserted	10%				
Task 2: Type created	10%				
Task 2: Correct use of REF construct	10%				
Task 2: Correct use of VARRAY construct	10%				
Task 3: Table created and relevant data inserted	10%				
Task 4: Query showing use of methods	10%				
Task 4: Query showing use of REF	10%				
Task 4: Query showing use of VARRAY	10%				

Appendix A – Hospital Case Study

