Guidelines for Term Project – COMP214

Course Name: Advance Database Concepts  
Course Code: COMP214  
Term: Winter 2023  
Due: Week 12 ,    
Presentation: Week 13 , during class,  
Weight: 15% of final grade  
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You will work in groups of maximum 4 people.  
The purpose of this assignment is to help you:  
•    Apply your comprehensive database knowledge to solve practical problem   
•    Become familiar with Sequences / indexes, Exceptions, PL/SQL programming units.  
Be sure to read the following general instructions carefully: This assignment should be completed by all the students in a group. Submit your solution through the dropbox. Your must be named according to the following rule: GroupName(projectName)\_Assignment#number.txt. e.g., FlowerShop\_Assignment#4.txt or \*.doc

Task:  
Create database back-end functionality and front end for an application of your choice using Oracle Database. For example and e-commerce solution, air line’s official website, an insurance quotation calculator, etc. (Scope accordingly.) Tasks will include: Interface Design, database design and implementation, data creation, testing and presentation.

1. Deliverables  
    a. Functional Front End  Interface for your project and presentation.............................................[3%]  
    b. Script file(s)  (.txt or .sql code) which should contains all the commands to create the above tables, sequences, indexes, triggers,  and functions when it is executed (this will create the same objects that exist for your project on the server )…................................................................ [10%]  
    c. Ms Word or Pdf file with group members, problem domain description, ER diagram and  print screens of execution of front end with tables content (using programming units) ……………...............................................................................................................................[2%]  
Note: Include scripts to run samples of your functions, procedures and triggers, packages, etc.  Front end marking upon presentation.

2. Contents of your Database: (to be included in the script file(s))  
    2 marks- Tables (data, lookup, audit/log tables) , constraints.   
– Minimum – 5 and Maximum 10. You can think and build these tables according to web application project (COMP229) or as an independent database project. (Scope accordingly.)

1 mark  - Sequences  
a.    Create at least one sequence   
b.    Use it to insert sample data  
c.    Use it to update table(s)

0.5 marks  - Indexes  
a.    Search is one of common functionalities, index plays a critical role in search  
b.    create few (min 2) indexes for those tables where search is performed frequently.

2 marks - Triggers  
For behind the scenes table entry/updating, you need to create at least 2 triggers.  
2 marks - Procedures  
You need to define at least two procedures so carrying out common operations on database. Include exception section, using cursors.

1 mark - Functions  
You need to define at least two functions so carrying out common operations on database. Include exception section.

1.5 marks – Packages   
a.    Use at least two procedures (could be previously created ones)   
b.    Use at least two functions (could be previously created ones)  
c.    Include global and private variables / constructs.   
d.    Use TYPE attribute and/or ROWTYPE attribute whenever it is appropriate.

3. Create  scripts to run samples of your functions, procedures and triggers, packages, etc.  
Front end marking upon presentation.  
Note: There should be minimum ten records (10 insert statements for data tables) and five records for reference/lookup type tables). You should be populating your tables with meaningful data.  
Note 2: Any form of plagiarism will be severely dealt with, and no mark will be awarded for the project. Please refer to the College policy outlined in the student’s rights and responsibilities provided to you by the college.