Database Application Development

Project – Assignment 1

Objective:

In this lab students learn:

- How to connect to an Oracle server from a C++ program
- How to write and execute SQL queries in a C++ program.

Instructions:

- In this Project Assignment 1, you should do the tasks listed in the topic below. You must create and use the database ER diagram that is assigned to your group as given below.
- **Project Group 1,3,5,13** please do create a system for a **SHOPPING MALL** to maintain and track different stores, their incomes, and the facility maintenance.
- **Project Group 2,4,6,14** please do create a system for a **HIGH RAISE CONDO** to maintain the owner's information and track facility maintenance, electricity usage and parking system.
- **Project Group 7,9,11,15** please do create a system for a **HIGH SCHOOL SYSTEM** to maintain the records of teachers, students, office staff, grades of students, salary, and track facility maintenance.
- **Project Group 8,10,12,16** please do create a system for an **ONLINE BANKING SYSTEM** to maintain the records of customers, accounts, employees, credit card accounts, and locations.

Tasks

1) Modify the code from the example file given in the project setup instructions file.
2) You should have a successful connection to your Oracle student account.
3) Consult as a group to create an ER Diagram and list the name of team members who are responsible for that table.
4) Write a select statement to display all the details of the table created from your Team Project's assignment. Step 4 and 5 will be your individual CPP file.
5) Combine your SELECT query option with other team members' SELECT query option to display all the tables created in your entire project. Step 5 and 6 will be combined CPP file.
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Individual Submission with group work:

This assignment requires group work and there are individual submissions and group submission.

Your submission should include your studentid, name in all the files that you are submitting in Blackboard.

Lab -Demo

1. During Lab-4, you will be showing the demo of tasks listed 1 and 2 above for a successful Oracle-Visual Studio connection

2. During Lab-5, your group will be sharing the ERD diagram developed for the application given for your group.

3. During Lab-6 week, you will be completing Project Assignment 1 and recording individual video demos of project and uploading the 5 min demo file along with other Word, CPP,S QL files listed below as a group and individual.

Individual submission will be 3 files

1. *A .sql file having create and insert values for the tables that you have chosen.(file naming convention* SQLfile_firstname)

2. *A single text-based .cpp file of the individual team member's code with the select operation of the chosen table (file naming convention* CPPfile_firstname (e.g CPPfile_seneca))

3. *A Word document showing the console output of your individual C++. (file naming convention* ConsoleOutput_firstname)

4. Individual 5 min video demo file of the entire project show casing, ERD, SQL data and the C++ output of simple select of a table created from Oracle.

Group submission will be 3 files.

1. *A Word document showing the ERD of the application and explaining each team members work of creating tables. (file naming convention* Groupnumber_ERD_DIAGRAM*)*

2. *Console output of combined C++ in a Word document (file naming convention* GroupNumber_combinedCPP file (e.g Group20_combinedCPPfile))

3. *A single text-based .cpp file of the entire project team's C++ file of all the Select queries of all the project team members (file naming convention* Groupnumber_combinedCPPConsoleOutputs

Assignment Marking Scheme

ITEMDESCRIPTION	Weight	Individual/Group mark
ERD diagram	20%	Group mark
SQL file of table insert and create	20%	Individual file and individual's mark
Individual C++ of member's chosen table	40%	Individual file and individual's mark
Working C++ file of all the Select queries of all the project team members	10%	Group mark
Recorded video of project presentation demo	10%	Individual mark