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**190905522 CSE D 62**

**DBS Lab-8 (Week 8) – Procedures, Functions & Triggers**

**Procedures:**

1. **Based on the University Database Schema in Lab 2, write a procedure which takes the dept\_name as input parameter and lists all the instructors associated with the department as well as list all the courses offered by the department. Also, write an anonymous block with the procedure call.**

**CODE:**

**OUTPUT:**

1. **Based on the University Database Schema in Lab 2, write a Pl/Sql block of code that lists the most popular course (highest number of students take it) for each of the departments. It should make use of a procedure course\_popular which finds the most popular course in the given department.**

**CODE:**

**OUTPUT:**

**Functions:**

1. **Write a function to return the Square of a given number and call it from an anonymous block.**

**CODE:**

**OUTPUT:**

1. **Based on the University Database Schema in Lab 2, write a Pl/Sql block of code that lists the highest paid Instructor in each of the Department. It should make use of a function department\_highest which returns the highest paid Instructor for the given branch.**

**CODE:**

**OUTPUT:**

**Row Triggers**

1. **Based on the University database Schema in Lab 2, write a row trigger that records along with the time any change made in the Takes (ID, course-id, sec-id, semester, year, grade) table in log\_change\_Takes (Time\_Of\_Change, ID, courseid, sec-id, semester, year, grade).**

**CODE:**

**OUTPUT:**

1. **Based on the University database schema in Lab: 2, write a row trigger to insert the existing values of the Instructor(ID, name, dept-name, salary) table into a new table Old\_ Data\_Instructor (ID, name, dept-name, salary) when the salary table is updated.**

**CODE:**

**OUTPUT:**

**Database Triggers**

1. **Based on the University Schema, write a database trigger on Instructor that checks the following:**

• **The name of the instructor is a valid name containing only alphabets.**

• **The salary of an instructor is not zero and is positive.**

• **The salary does not exceed the budget of the department to which the instructor belongs.**

**CODE:**

**OUTPUT:**

1. **Create a transparent audit system for a table Client\_master (client\_no, name, address, Bal\_due). The system must keep track of the records that are being deleted or updated. The functionality being when a record is deleted or modified the original record details and the date of operation are stored in the audit client(client\_no, name, bal\_due, operation, userid, opdate) table, then the delete or update is allowed to go through.**

**CODE:**

**OUTPUT:**

**Instead of Triggers**

1. **Based on the University database Schema in Lab 2, create a view Advisor\_Student which is a natural join on Advisor, Student and Instructor tables. Create an INSTEAD OF trigger on Advisor\_Student to enable the user to delete the corresponding entries in Advisor table.**

**CODE:**

**OUTPUT:**

**THE END**