Class Test 08

Instructions:

1. **Write a Summary (Softcopy, PDF Format) on ExceptionHandlingTutorial_Spring2024-2025 and DatabaseConnectionTutorial.**
2. **Submit pdf in link provided in your VUES Student Account**
3. **The name of PDF must be your ID**

Start from here: ⟶ **Summary on ExceptionHandlingTutorial_Spring2024-2025:** The tutorial focuses on how PL/SQL handles runtime errors, known as exceptions, which may arise due to Oracle server errors or user-defined conditions. Exceptions can be categorized into three types: predefined Oracle server exceptions (NO_DATA_FOUND, TOO_MANY_ROWS, ZERO_DIVIDE), non-predefined Oracle server exceptions that require naming and binding with Oracle error codes using PRAGMA EXCEPTION_INIT, and user-defined exceptions that are declared and raised explicitly by the programmer using the RAISE statement. The tutorial explains how to trap exceptions using the EXCEPTION block with WHEN clauses, allowing specific actions to be taken when an error occurs. Only one handler is executed, and WHEN OTHERS must be used as the last clause for handling unexpected exceptions. In addition, functions like SQLCODE and SQLERRM are used to retrieve the numeric error code and its corresponding message, respectively. The tutorial highlights how exceptions propagate through nested PL/SQL blocks—if not handled in the inner block, the exception moves to the outer one. The concept of exception propagation is essential in large applications where multiple procedures and functions are interlinked. The tutorial also introduces the RAISE_APPLICATION_ERROR procedure, which enables developers to return custom error messages from stored procedures or functions, making error reporting more meaningful and consistent with Oracle's standard errors. Practical examples are included throughout, showing how to declare exceptions, raise them when specific

conditions are met, and respond to them through error-handling routines. These techniques help ensure better control over program flow and more robust, user-friendly database applications. Overall, the tutorial provides a clear and structured approach to handling exceptions in PL/SQL programming.

Summary on DatabaseConnectionTutorial: The Database Connection Tutorial gives a simple guide on how to connect to an Oracle database using two common programming languages: C# and PHP. It helps students learn how to connect their code to a database in real-life projects. The C# part is based on a past project called the Babysitter Service Management System. It likely includes steps like adding important libraries (such as Oracle.DataAccess.Client), writing the connection string, and using OracleConnection to open and manage the database connection. The PHP part comes from another project called the Planetary Management System. It shows how to use functions like oci_connect() or PDO_OCI to connect to the database, run queries, and handle results. Even though the tutorial is short, it gives a useful starting point for students to understand how to link a database with their code using C# or PHP, with help from real project examples.