

Assignment 4 Exceptions in Packages

Objectives

- Learn how to define exception types inside packages
- Design functions and procedures that use exceptions in packages
- Handle exceptions generated by functions and procedures

Instructions

Follow the instructions below to create an SQL file called assignment4.sql. This file should be run on PDBORA19C. Ensure that your file runs from start to finish without error and displays the correct output. For this assignment, you will need to setup the JUSTLEE database in PDBORA19C.

Expanding Packages

Using the book_store package created in assignment 2 and added to in assignment 3, add the following functions to the package. If the function requires a special type, ensure you also add that type to the package.

- Create a subprogram called **rename_category** that changes the name of a category (for all books of that category). It should take 2 inputs, the name of the category, and the name it should be changed to. If it finds a category that does not exist, it should raise a user defined “category not found” exception. This exception must be defined in the package.
- Create a subprogram called **add_publisher** that adds a new publisher to the database. It should take as input all necessary information to create a publisher record. If the publisher already exists, it should raise a user defined “publisher already exists” exception. This exception must be defined in the package.

Testing the Package

Write an anonymous PL/SQL block that performs the following:

- Renames the “Computer” category to “Computer Science”
- Renames the “Teaching” category to “Education”
- Adds a publisher named “Dawson Printing, John Smith, 111-555-2233”
- Adds a publisher named “Publish Our Way, Jane Tomlin, 010-410-0010”

Note, your code should handle any exceptions thrown by the procedures or functions. A sensible error message must be printed to DBMS_output.

Deliverable

Submit a file named assignment4.sql to Moodle. The sql file should run from start to finish without error and display the correct output. Ensure that any previously defined packages or types with the same name are dropped at the beginning of the script. For the due date see Moodle.

Resources

- PL/SQL Exceptions https://www.tutorialspoint.com/plsql/plsql_exceptions.htm

- Oracle PL/SQL tutorial <https://www.oracletutorial.com/plsql-tutorial/plsql-exception/>
- List of system exceptions
https://www.techonthenet.com/oracle/exceptions/named_system.php