Lab 6: Object-Relational Database Features of Oracle

Due date: Monday, March 10, 12:00pm (midnight).

Note: The results of the lab will be discussed in class on Tuesday, March 11, so the deadline is hard.

Lab Overview

The lab is designed to give you some hands-on experience with object-relational functionality of Oracle. This is a group lab, to be done in teams of three (your project teams are ok).

Assignment

Each student in the class will get a CD. Each group is tasked with the following assignment:

- Examine the CDs received by your group.
- Based on the examination of the CDs, build an object-relational model of a CD collection. In particular, the main objective of the database model you are designing is to store, retrieve and manage information about (the instructor's)[1] CD collection. To make your database feasible and well-structured, you may include other relations, object types, etc. into the database model, but the main expected workload for the database is work with information about CDs.

  Please, in building your model, use only the CDs provided to your team by the instructor.
- Write an SQL script (`cds.sql`) which

[1]Since you are building it based on the instructor's CDs.

  - Builds the database for storing the CD collection.
  - Populates the database with the information about the CDs your team received from the instructor.
  - Displays the list of CDs stored in the database.

  Use `set echo on` in the beginning of your `cds.sql` script to ensure that all commands are pointed out when the script is run.

  Separately from this script, create a cleanup (`cds-cleanup.sql`) script, which removes the CD collection from Oracle. This includes removing any type definitions.

- Create a single (powerpoint) slide outlining the structure of your object-relational model for the CD collection.

Submission

Submit in softcopy (email to dekhtyar@csc.calpoly.edu):

1. `cds.sql`.
2. `cds-cleanup.sql`.
3. Data model description. You can use any object-oriented-style syntax to describe the database. ODL (Object Definition Language) is described in a handout you received, but you can use C++ or Java syntax, or any other syntax, as long as the structure of your model us unambiguous. Submit a plain text file describing the model.
4. Presentation slide. These will be collected and used in class.

Submit in hardcopy:

1. Data model description or your presentation slide. (since both will contain very similar information, one of the two is sufficient for my purposes).
2. The result of running `cds.sql` in sqlplus. (note, if you used `set echo on` as asked, your SQL statements will also be shown in this printout).

Grading

Your submission will be graded based on the following criteria:

- Successful storage and retrieval of the CD information in your model.
- Conformance to lab assignment: submission of all relevant materials on time.
- Return of all CDs to the instructor on Tuesday, March 11.