CIS 3050 Database Design and Development Course
Flipped IN-CLASS Lesson Plan Template

Topic or concept:
Basic SQL Data Retrieval Statements

Basic objectives for preparatory work:	Advanced objectives for classwork & after class work:
To describe the purpose of the SQL language in the database To identify SQL data retrieval statement syntax To identify SQL DDL and DMLs To understand SELECT Statements	To distinguish three type of SQL statements To be able to write SELECT on given queries on the database To be able to execute SQL statements and get corresponding output results in the Oracle DBMS SQL Plus environment

	Time planned	Activity and rationale	Resources needed
Beginning of class period	5 mins	To activate knowledge from preparatory reading Q&A from preparatory activities. Clarify misconceptions and offer new information To explain the relational database schema using Pine Valley Furniture Company (PVFC) case study	*Textbook Chapter 5 SQL Slides* PVFC database conceptual design PVFC database logical design PVFC referential integrity
Middle of period	15 mins	*To explain the DDL and DML syntax in the* PVFC *SQL Data Script File* *To demonstrate how to load the* PVFC *data script file into Oracle DBMS environment* *To ensure students have* database created on Oracle Server	*Software: Oracle DBMS SQLPlus environment on each student's computer* PVFC *SQL Data Script File*
Middle of period (use if needed)	45 mins	*To demonstrate how to use Oracle SQLPlus to retrieve data* *To run SQL queries and retrieve data output results from* PVFC database with students	*Textbook Chapter 5 SQL Slides* *SQL statement summary sheet with arithmetic, relational, Boolean and special operators and five functions*

	Time planned	Activity and rationale	Resources needed
End of period	10 mins	Instructor summarizes on students' performance on the computer Students solidify understanding in preparation for doing advanced work at home.	*Software: Oracle DBMS SQLPlus environment* PVFC database

Flipped AFTER CLASS Work Plan Template

Advanced learning objective	Activity and rationale	Instructions to students
1. To be able to write SELECT on given queries 2. To be able to execute SQL statements and get corresponding output results in the Oracle DBMS SQLPlus environment	*Give students EIGHT queries on* PVFC database Ask students to write down SQL statement, execute them in Oracle and display the corresponding output results. Solution template with similar 8 questions will be provided to students	Continue working on your PVFC database on the following queries using SQL statements. Copy and paste 1) query question, 2) SQL statement and 3) SQL output to a word file, and upload it into HWK 3 SQL Folder on Canvas You may work together; just be sure that YOU can solve problems independently as the mid-term-exam will be similar to this work.

GUIDED PRACTICE

Class: Basic SQL Data Retrieval Statements
Date assigned: 5/22
Date due: 5/22
Time estimate to complete this assignment: 60 minutes in class

Overview/Introduction

This lesson is to introduce students how to write and execute run SQL statement to answer the query questions using Oracle DBMS on their computers with instructor's demonstration on the computer on overhead projector with Q and A interaction in front of the classroom. The SQL clause syntax practices with arithmetic, relational, Boolean and special operators and five functions are as follows.

SELECT …… FROM …….
WHERE …….
GROUP BY..... HAVING ……
ORDER BY ……..

Learning Objectives
Basic objectives

- To describe the purpose of the SQL language in the database
- To identify SQL data retrieval statement syntax
- To identify SQL DDL and DMLs
- To understand SELECT statements

Advanced objectives

- To distinguish three types of SQL statements
- To be able to write SELECT on given queries on the database
- To be able to execute SQL statements and get corresponding output results in the Oracle DBMS SQL Plus environment

Preparatory Activities and Resources:

- Students must read the sections in Chapter 5 and the slides before the class.

- Students must explore SQL on an interactive online tutorial to experience SQL.

Quizzes: Please complete before the class.

Students must take the SQL multiple choice questions graded quiz on Canvas before the class.

Questions?

Students post questions on Instructor's Q and A section on Canvas

ADVANCED PRACTICE

This is given for students to complete after the class meeting in which they work together.

Class: Basic SQL Data Retrieval Statements
Date assigned: Week 4
Date due: in a week
Time estimate to complete this assignment: 2 hours

Learning Objectives: Advanced objectives
List 3-4 learning objectives that you expect students to need help mastering in class and after class.

To distinguish three type of SQL statements
To be able to write SELECT on given queries on the database
To be able to execute SQL statements and get corresponding output results in the Oracle DBMS SQLPlus environment

Activities & deliverables

1. Give detailed, action-oriented instructions for completing the assignment. Make sure to also include a reflective component.

   Give students EIGHT queries on PVFC database
   Ask students to write down SQL statement, execute them in Oracle and display the corresponding output results in Oracle.

2. Describe what students should turn in, by when.

   Continue working on your PVFC database on the following queries using SQL statements. Copy and paste 1) query question, 2) SQL statement and 3) SQL output to a word file, and upload it into HWK 3 SQL Folder on Canvas before the class starts on the due date.

Resources:

3. Give a "playlist" of resources to help students complete the assignment.

   The solution template with similar 8 questions will be provided to help students

Questions?

4. Give a way for students to get help.

   Students can posts questions for instructor in the Q and A Section on Canvas. The instructor will provide answers to the questions