**Practical 10**

# SQL – Advanced SELECT statement, Subqueries

## Instructions

Refer to the **ORDER** database schema (given in Practical 9). Write the SQL statements for the following queries:

**Aggregate Functions**

1. (i) List the full details of all the Customers. (28 rows selected)

(ii) Amend the SQL to output the total number of Customers. (1 row -> 28)

1. (i) List the full details of Customers who live in the state ‘California’. (18 rows selected)

(ii) Amend the SQL to output the total number of Customers who live in the state ‘California’. (1 row -> 18)

1. (i) List the order number and the shipping charge of those Orders placed by ‘Anthony Higgins’. (4 rows selected)

(ii) Amend the SQL to output the total number of Orders placed by ‘Anthony Higgins’ and the total shipping charges he has to pay. (1 row -> 4, $38)

1. (i) List the unit price of all the Products. (74 rows selected)

(ii) Amend the SQL to output the cost of the most expensive Product. (1 row -> $960)

1. (i) List the product number and the unit price of all the Products with a description of ‘running shoes’. (6 rows selected).

(ii) Amend the SQL to output the count of the different kinds, the most expensive, the least expensive and the average price (round to 2 dec pl) of all the ‘running shoes’ Products. (1 row -> 6, $102, $42.50, $83.08).

**Aggregate Functions, GROUP BY & HAVING clause**

1. (i) As one customer can place one or more orders, list for each customer, the customer’s number and the total number of orders he/she has placed. (17 rows)

(ii) Modify your answer, to display also the *customer’s first name and last name*. (17 rows)

(iii) Modify your answer, to display only for *those customers who have placed more than 1 orders*. (4 rows -> customer\_num : 104, 106, 110, 117)

1. (i) As one order can consists of one or more products, list for each order, the order’s number and the total number of items/products bought in the order. (23 rows) Hint : Query Order\_detail table.

(ii) Modify your answer, to display also the *total price of all products in each order*. (23 rows)

(iii) Modify your answer, to display only for *those orders that have more than 3 items.* (9 rows)

**Subqueries (Optional)**

1. By using the answer to question 4 (ii) in a subquery or otherwise, list the product details (i.e. product number, supplier code, unit price and product description) *for the most expensive product*. (1 row -> 4, HSK, 960, football)
2. By using the answer to question 6 (i) in a subquery (to exclude customers who have placed at least an order) or otherwise, list the customer details (i.e. first name, last name) of those *customers who have not placed any orders*. (11 rows, as follows :)

FNAME LNAME

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Carole Sadler

Philip Currie

Raymond Vector

Charles Ream

Donald Quinn

Jane Miller

Lana Beatty

Frank Albertson

Dick Baxter

James Henry

Frank Lessor

1. By using the answer to question 7 (iii) in a subquery or otherwise, list the order details (i.e. order number, item number, product number, quantity) *for those orders that have more than 3 items*. (41 rows -> order num : 1004, 1005, 1006, 1007, 1013, 1016, 1018, 1021, 1023)