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Database Design Project

Oracle Baseball League Store Database

Project Scenario:

You are a small consulting company specializing in database development. You have just been awarded the contract to develop a data model for a database application system for a small retail store called Oracle Baseball League (OBL).

The Oracle Baseball League store serves the entire surrounding community selling baseball kit. The OBL has two types of customer, there are individuals who purchase items like balls, cleats, gloves, shirts, screen printed t-shirts, and shorts. Additionally customers can represent a team when they purchase uniforms and equipment on behalf of the team.

Teams and individual customers are free to purchase any item from the inventory list, but teams get a discount on the list price depending on the number of players. When a customer places an order we record the order items for that order in our database.

OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

Section 6 Lesson 9 Exercise 2: Joining Tables Using JOIN

Write SELECT Statements Using Data From Multiple Tables Using Equijoins and Non-Equijoins (S6L9 Objective 1)

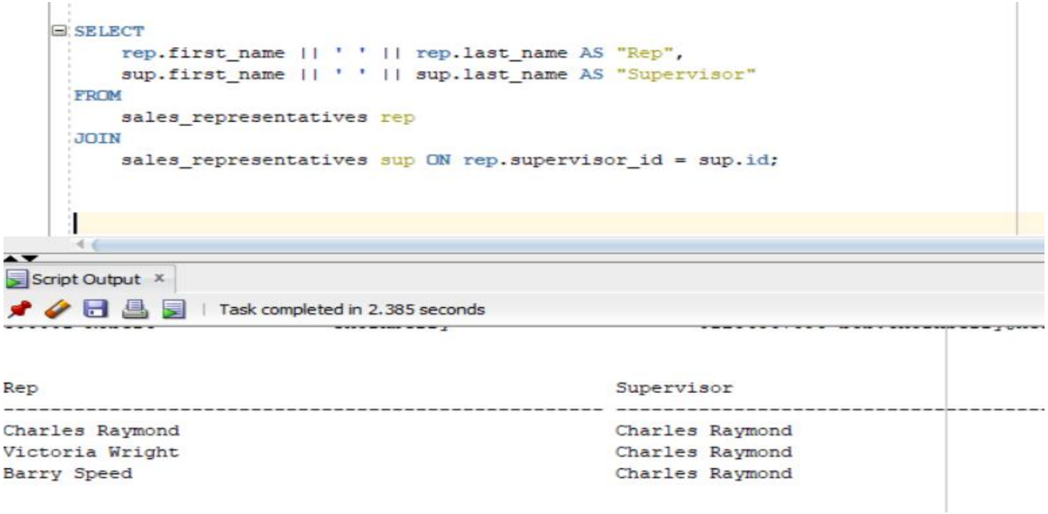
Part 1 : Use a Self-Join to Join a Table to Itself (S6L9 Objective 2)

1. Write a query that will display who the supervisor is for each of the sales representatives. The information should be displayed in two columns, the first column will be the first name and last name of the sales representative and the second will be the first name and last name of the supervisor. The column aliases should be Rep and Supervisor.

Code:

```
SELECT
rep.first_name || ' ' || rep.last_name AS "Rep",
sup.first_name || ' ' || sup.last_name AS "Supervisor"
FROM
sales_representatives rep
JOIN
sales_representatives sup ON rep.supervisor_id = sup.id;
```

Output:



```
SELECT
    rep.first_name || ' ' || rep.last_name AS "Rep",
    sup.first_name || ' ' || sup.last_name AS "Supervisor"
FROM
    sales_representatives rep
JOIN
    sales_representatives sup ON rep.supervisor_id = sup.id;
```

```
Rep                                                 Supervisor
--------------------------------------------------- -------------------------------------
Charles Raymond                                     Charles Raymond
Victoria Wright                                     Charles Raymond
Barry Speed                                         Charles Raymond
```

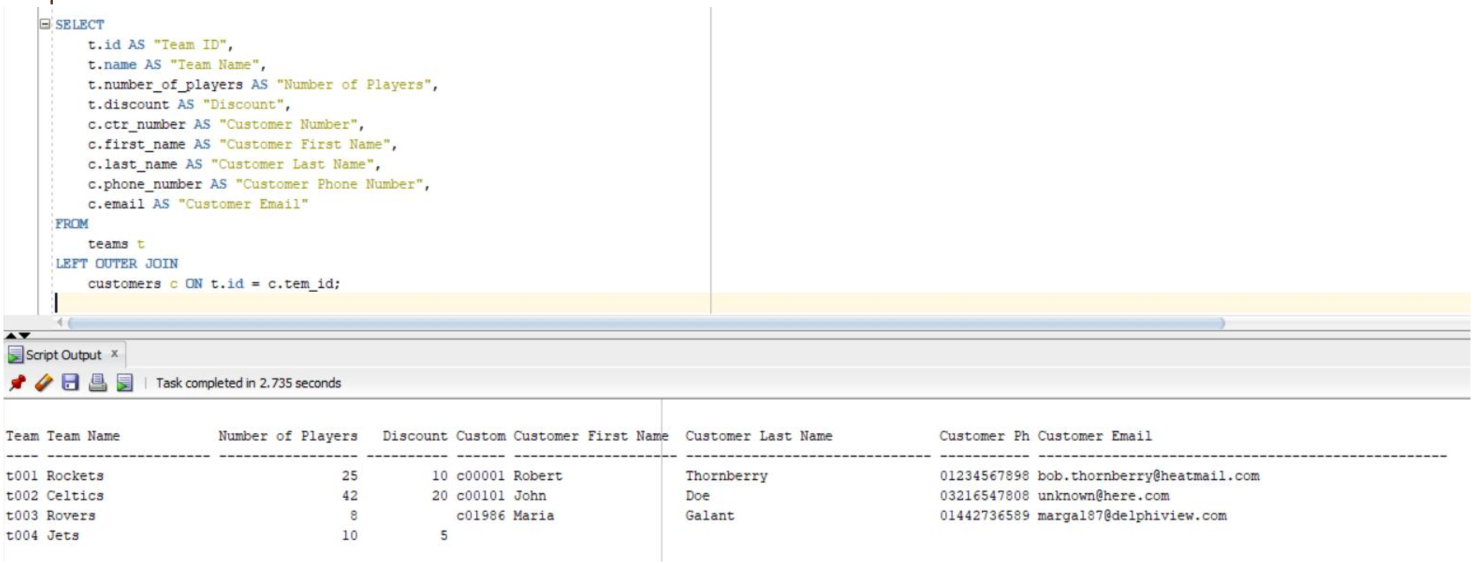
Part 2 : Use OUTER joins (S6L9 Objective 3)

1. Write a query that will display all of the team and customer information even if there is no match with the table on the left (team).

Code:

SELECT
t.id AS "Team ID",
t.name AS "Team Name",
t.number_of_players AS "Number of Players",
t.discount AS "Discount",
c.ctr_number AS "Customer Number",
c.first_name AS "Customer First Name",
c.last_name AS "Customer Last Name",
c.phone_number AS "Customer Phone Number",
c.email AS "Customer Email"
FROM
teams t
LEFT OUTER JOIN
customers c ON t.id = c.tem_id;

Output:



```
SELECT
    t.id AS "Team ID",
    t.name AS "Team Name",
    t.number_of_players AS "Number of Players",
    t.discount AS "Discount",
    c.ctr_number AS "Customer Number",
    c.first_name AS "Customer First Name",
    c.last_name AS "Customer Last Name",
    c.phone_number AS "Customer Phone Number",
    c.email AS "Customer Email"
FROM
    teams t
LEFT OUTER JOIN
    customers c ON t.id = c.tem_id;
```

```
Team Team Name            Number of Players   Discount Custom Customer First Name  Customer Last Name             Customer Ph Customer Email
---- -------------------- ----------------- ---------- ------ -------------------- ------------------------------ ----------- --------------------------------------------------
t001 Rockets                             25         10 c00001 Robert               Thornberry                     01234567898 bob.thornberry@heatmail.com
t002 Celtics                             42         20 c00101 John                 Doe                            03216547808 unknown@here.com
t003 Rovers                               8            c01986 Maria                Galant                         01442736589 margal87@delphiview.com
t004 Jets                                10          5
```

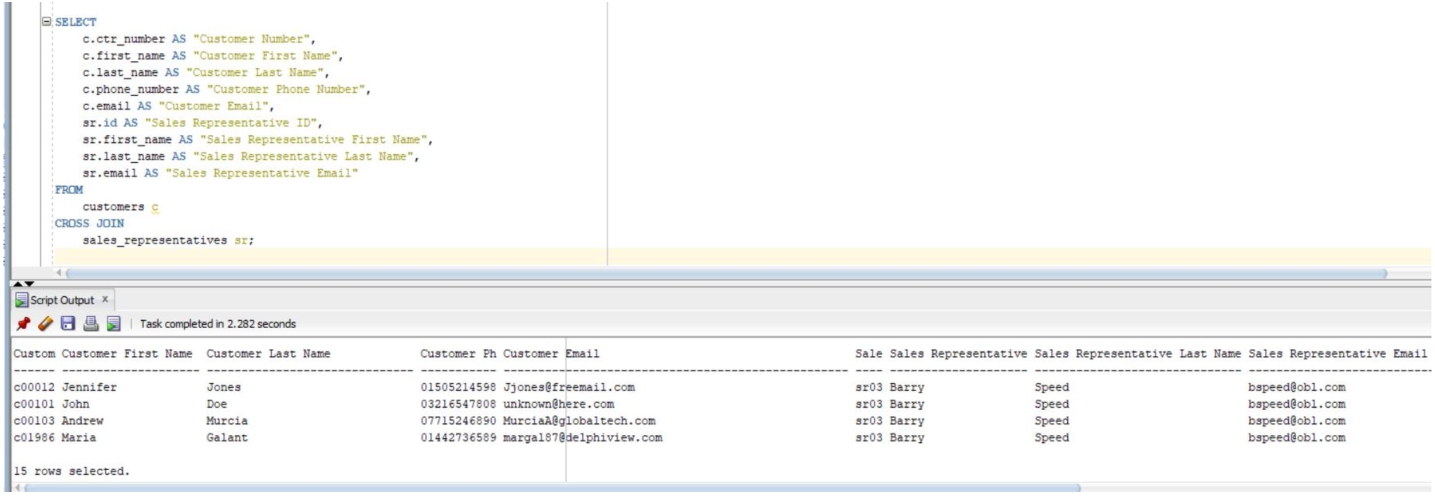
Part 3 : Generating a Cartesian Product (S6L9 Objective 4)

1. Create a Cartesian product between the customer and sales representative tables.

   Code:

```
SELECT
c.ctr_number AS "Customer Number",
c.first_name AS "Customer First Name",
c.last_name AS "Customer Last Name",
c.phone_number AS "Customer Phone Number",
c.email AS "Customer Email",
sr.id AS "Sales Representative ID",
sr.first_name AS "Sales Representative First Name",
sr.last_name AS "Sales Representative Last Name",
sr.email AS "Sales Representative Email"
FROM
customers c
CROSS JOIN
sales_representatives sr;
```

   Output:



```
SELECT
    c.ctr_number AS "Customer Number",
    c.first_name AS "Customer First Name",
    c.last_name AS "Customer Last Name",
    c.phone_number AS "Customer Phone Number",
    c.email AS "Customer Email",
    sr.id AS "Sales Representative ID",
    sr.first_name AS "Sales Representative First Name",
    sr.last_name AS "Sales Representative Last Name",
    sr.email AS "Sales Representative Email"
FROM
    customers c
CROSS JOIN
    sales_representatives sr;
```

Task completed in 2.282 seconds

```
Custom Customer First Name  Customer Last Name             Customer Ph Customer Email                                      Sale Sales Representative Sales Representative Last Name Sales Representative Email
------ -------------------- ------------------------------ ----------- --------------------------------------------------- ---- -------------------- ------------------------------ ---------------------------
c00012 Jennifer             Jones                          01505214598 Jjones@freemail.com                                 sr03 Barry                Speed                          bspeed@obl.com
c00101 John                 Doe                            03216547808 unknown@here.com                                    sr03 Barry                Speed                          bspeed@obl.com
c00103 Andrew               Murcia                         07715246890 MurciaA@globaltech.com                              sr03 Barry                Speed                          bspeed@obl.com
c01986 Maria                Galant                         01442736589 margal87@delphiview.com                             sr03 Barry                Speed                          bspeed@obl.com

15 rows selected.
```