No. Date:

DATABASE SECTION 06 - Lab Exercises SQL 4

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## EXERCISE 1

### Part 1 : Creating Natural Joins

1.
```
SELECT * FROM SALES_REPRESENTATIVES
NATURAL JOIN SALES_REP_ADDRESSES;
```

2.
```
SELECT id, first_name, last_name, address_line_1, address_line_2, city,
       email, phone_number
FROM SALES_REPRESENTATIVES
NATURAL JOIN SALES_REP_ADDRESSES;
```

### Part 2 : Creating Joins with the USING clause

1.
```
SELECT id, s.first_name, s.last_name, a.address_line_1, a.address_line_2,
       a.city, s.email, s.phone_number
FROM SALES_REPRENSENTATIVES s JOIN SALES_REP_ADDRESSES a
USING (id);
```

2.
```
SELECT *
FROM ITEMS JOIN PRICE_HISTORY
USING (itm_number);
```

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→ Part 3 : Creating Joins with the ON Clause

1. SELECT c.ctr_number AS "Cust Number", c.first_name AS "Cust First Name",
c.last_name AS "Cust Last Name", c.email AS "Cust Email",
s.id AS "Sales Rep ID", s.first_name AS "Sales Rep First Name"
s.last_name AS "Sales Rep Last Name", s.email AS "Sales Rep Email"
FROM CUSTOMERS c JOIN SALES_REPRENSENTATIVES s
ON(c.sre_id = s.id);

→ Part 4 : Creating Three-Way Joins with the ON Clause

SELECT t.name AS "Team Name", c.ctr_number AS "Cust Number",
c.first_name AS "Cust First Name", c.last_name AS "Cust Last Name",
c.email AS "Cust Email", s.id AS "Sales Rep ID",
s.first_name AS "Sales Rep First Name", s.last_name AS "Sales Rep
Last Name", s.email AS "Sales Rep Email"
FROM (CUSTOMERS c JOIN TEAMS t ON(c.tem_id = t.id))
JOIN SALES_REPRESENTATIVES s ON(c.sre_id = s.id);

→ Part 5 : Applying Additional Conditions to a Join

SELECT t.name AS "Team Name", c.ctr_number AS "Cust Number",
c.first_name AS "Cust First Name", c.last_name AS "Cust Last Name"
c.email AS "Cust Email", s.id AS "Sales Rep ID",
s.first_name AS "Sales Rep First Name", s.last_name AS "Sales Rep
Last Name", s.email AS "Sales Rep Email"
FROM CUSTOMERS c JOIN TEAMS t ON(c.tem_id = t.id))
JOIN SALES_REPRESENTATIVES s ON(c.sre_id = s.id)
WHERE c.ctr_number = 'c00001';

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→ Part 6 : Retrieving Records with Nonequijoins

1. SELECT 'The cost of the ' || i.name || ' on this day was ' || l.cost AS "Cost Information"
FROM (ITEMS i JOIN PRICE_HISTORY h ON (i.item_number = h.item_number)
JOIN INVENTORY_LIST l ON (i.ilt_id = l.id)
WHERE i.item_number = 'im01101045' AND TO_DATE('12-DEC-16')
> h.start_date ;

## EXERCISE 2

→ Part 1 : Use a Self-Join to Join a Table to Itself

1. SELECT s.first_name || ' ' || s.last_name AS "Supervisor",
r.first_name || ' ' || r.last_name AS "Rep"
FROM SALES_REPRESENTATIVES s JOIN SALES_REPRESENTATIVES r
ON s.supervisor_id = r.id ;

→ Part 2 : Use OUTER joins

1. SELECT *
FROM TEAMS t
FULL OUTER JOIN CUSTOMER c
ON t.id = c.tem_id ;

Part 3 : Generating a Cartesian Product

1. SELECT *
FROM CUSTOMERS, SALES_REPRESENTATIVES ;