UTM

UNIVERSITI TEKNOLOGI MALAYSIA

Faculty of Computing

DATABASE

LAB 4

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Section Lesson 9 Exercise 1: Joining Tables Using JION.

Part 1: Creating Natural Joins.

<1> SELECT * FROM SALES_REPRESENTATIVES NATURAL JOIN SALES_REP_ADDRESSES;

<2> SELECT id, first_name, last_name, email, phone_number, address_line_1, address_line_2, city

FROM SALES_REPRESENTATIVES. NATURAL_JOIN SALES_REF_ADDRESSES;

Part 2: Creating Joins with the USING Clause

<1> SELECT id, first_name, last_name. email, phone_number, address_line_1, address_line_2, city

FROM SALES_REPRESENTATIVES NATURAL JOIN SALES_REF_ADDRESSES using (id)

<2> SELECT * FROM ITEMS JOIN PRICE_HISTORY USING (item_number);

Part3: Creating Joins with the ON Clause

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", c.sre_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_REPRESENTATIVES s ON (c.sre_id = s.id

Part 4-Creating Three-way Joins with the ON clause

<1> 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", c.sre_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", t.name AS "Team Name"
FROM CUSTOMERS c JOIN SALES_REPRESENTATIVES s ON (c.sre_id = s.id);
JOIN TEAMS t ON (c.tem_id = t.id);

Part 5: Applying Additional Conditions to a Join

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", c.sre_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", t.name AS "Team Name",
FROM CUSTOMERS c JOIN SALES_REPRESENTATIVES s ON (c.sre_id = s.id);
JOIN TEAMS t ON (c.tem_id = t.id) WHERE c.ctr_number = ('COOOO1');

Part 6: Retrieving Records with Nonequijoins

```
SELECT 'The cost of the ' || i.name || ' on this day was ' || p.price AS "output"
FROM ITEMS i JOIN PRICE_HISTORY p ON (i.itm_number = p.itm_number)
WHERE i.itm_number = ('im01101013') AND TO_DATE('12-Dec-2016', 'DD-Mon-YYYY')
BETWEEN p.start_date AND p.end_date;
```

Section 6 Lesson 9 Exercise 2: Joining Tables Using JOIN

Part 1: Use a self-join to join a table to itself (SL9 Objective 2)

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

Part 2: Use OUTER joins

<1> `SELECT * FROM TEAMS t LEFT OUTER JOIN CUSTOMER c ON (c.tem_id = t.id);`

Part 3: Generating a Cartesian Product

<1> `SELECT * FROM CUSTOMERS, SALES_REPRESENTATIVES;`