

MERGE & DML Subquery

MI2154 – SQL LANJUT

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Sasaran Pembelajaran

- Mampu menggunakan perintah MERGE untuk memanipulasi data
- Mampu menggunakan subquery untuk memanipulasi data

Perintah MERGE

- Merupakan gabungan antara perintah UPDATE dan INSERT (UPSERT).
- Memiliki kemampuan untuk melakukan penambahan dan perubahan data tergantung dari kondisi.
- Melakukan UPDATE jika data sudah ada dan INSERT jika data belum ada
 - Menghindari update/ insert secara terpisah
 - Meningkatkan performansi
 - Sangat berguna dalam penerapan datawarehouse

MERGE

```
MERGE INTO table_name table_alias  
USING (table/view/sub_query) alias  
ON (join condition)  
WHEN MATCHED THEN  
UPDATE SET  
col1 = col_val1,  
col2 = col2_val  
WHEN NOT MATCHED THEN  
INSERT (column_list)  
VALUES (column_values);
```


SQL>SELECT * FROM dept;

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
60	HELP DESK	PITTSBURGH
40	OPERATIONS	BOSTON

SQL>SELECT * FROM dept online;

DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON
20	RESEARCH DEV	DALLAS
50	ENGINEERING	WEXFORD

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6 rows selected.

```
SQL>MERGE INTO dept d
  USING dept online o
 ON (d.deptno = o.deptno)
 WHEN MATCHED THEN
   UPDATE SET d.dname = o.dname, d.loc = o.loc
 WHEN NOT MATCHED THEN
   INSERT (d.deptno, d.dname, d.loc)
   VALUES (o.deptno, o.dname, o.loc);
```

3 rows merged.

SQL>SELECT * FROM dept;

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
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SQL>SELECT * FROM dept_online;

DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON
20	RESEARCH DEV	DALLAS
50	ENGINEERING	WEXFORD

6 rows selected.

```
SQL>MERGE INTO dept d
  USING (SELECT deptno, dname, loc
        FROM dept_online) o
 ON (d.deptno = o.deptno)
WHEN MATCHED THEN
  UPDATE SET d.dname = o.dname, d.loc = o.loc
WHEN NOT MATCHED THEN
  INSERT (d.deptno, d.dname, d.loc)
  VALUES (o.deptno, o.dname, o.loc);
```

3 rows merged.

Menggunakan Subquery Untuk Memanipulasi Data

```
INSERT INTO sales_reps(id, name,  
    salary, commission_pct)  
SELECT employee_id, last_name,  
    salary, commission_pct  
FROM employees  
WHERE job_id LIKE '%REP%';
```


Menggunakan Subquery Untuk Membuat Tabel

Perintah: **CREATE TABLE AS (subquery)**

- Contoh:

- **CREATE TABLE emp13 AS SELECT * FROM employees**

Menggunakan Subquery Sebagai Target INSERT

```
INSERT INTO
(SELECT employee_id, last_name,
email, hire_date, job_id, salary,
department_id
FROM emp13
WHERE department_id = 50)
VALUES (99999, 'Taylor', 'DTAYLOR',
TO_DATE('07-JUN-99', 'DD-MON-RR'),
'ST_CLERK', 5000, 50);
```

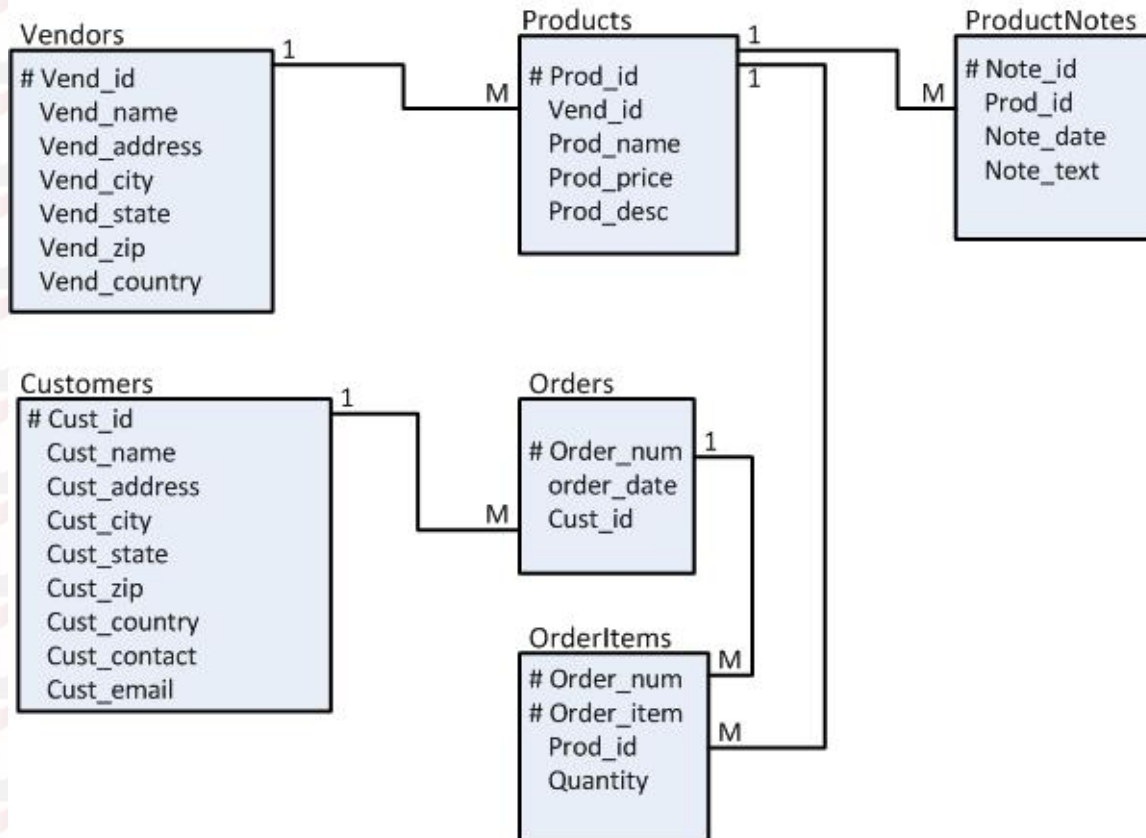
Menggunakan Subquery untuk UPDATE

```
UPDATE emp13
SET job_id = (SELECT job_id
FROM employees
WHERE employee_id = 205),
salary = (SELECT salary
FROM employees
WHERE employee_id = 168)
WHERE employee_id = 114;
```

Menggunakan Subquery untuk DELETE

```
DELETE FROM emp13
WHERE department_id IN
( SELECT department_id
FROM departments
WHERE department_name
LIKE '%Public%' OR department_name
LIKE '%Accounting%' )
AND job_id = (SELECT job_id FROM
emp13 WHERE
first_name='Kimberely');
```

Schema Order Entry (OE)



- Studi kasus penjualan
- Digunakan untuk studi kasus assessment

Membuat Schema OE

- Buatlah user yang bernama OE
- Berilah Role CONNECT dan RESOURCE
- Kopikan file “Create_Order_Entry.sql” dan “Input_Order_Entry.sql” ke directory C:\
- Panggil file tersebut menggunakan SQL*PLUS dengan cara:

```
– @ 'C:\Create_Order_Entry.sql'
```

```
– @ 'C:\Input_Order_Entry.sql'
```

REFERENSI

- **Greenberg, N. (Edition 1.1 August 2004). *Oracle Database 10g: SQL Fundamental II*. Jobi Varghese – BAB 3**
- **Gavin Powell, C.M,D.(2005). *Oracle SQL Jumpstart With Examples*. USA: Elsevier Inc – BAB 12**