**JURNAL**

CREATE OR REPLACE PACKAGE PKG\_DEPARTMENT IS

FUNCTION get\_department(dep\_id departments.department\_id%type) RETURN departments%ROWTYPE;

FUNCTION get\_department(dep\_name departments.department\_name%type) RETURN departments%ROWTYPE;

FUNCTION get\_department(man\_id departments.manager\_id%type, loc\_id departments.location\_id%type)

RETURN departments%ROWTYPE;

FUNCTION get\_department(loc\_id departments.location\_id%type) RETURN departments%ROWTYPE;

FUNCTION get\_department(dep\_id CHAR) RETURN departments%ROWTYPE;

FUNCTION get\_department(dep\_id departments.department\_id%type) RETURN VARCHAR2;

PROCEDURE del\_department(dep\_id departments.department\_id%type);

PROCEDURE del\_department(dep\_name departments.department\_name%type);

PROCEDURE del\_department(loc\_id departments.location\_id%type);

END pkg\_department;

/

CREATE OR REPLACE PACKAGE BODY PKG\_DEPARTMENT IS

FUNCTION get\_department(dep\_id departments.department\_id%type) RETURN departments%ROWTYPE IS

CURSOR cur IS SELECT \* FROM departments WHERE department\_id = dep\_id;

dep departments%ROWTYPE;

BEGIN

OPEN cur;

FETCH cur INTO dep;

CLOSE cur;

RETURN dep;

END get\_department;

FUNCTION get\_department(dep\_name departments.department\_name%type) RETURN departments%ROWTYPE IS

CURSOR cur IS SELECT \* FROM departments WHERE department\_name = dep\_name;

dep departments%ROWTYPE;

BEGIN

OPEN cur;

FETCH cur INTO dep;

CLOSE cur;

RETURN dep;

END get\_department;

FUNCTION get\_department(man\_id departments.manager\_id%type, loc\_id departments.location\_id%type)

RETURN departments%ROWTYPE IS

CURSOR cur IS SELECT \* FROM departments WHERE manager\_id = man\_id AND location\_id = loc\_id;

dep departments%ROWTYPE;

BEGIN

OPEN cur;

FETCH cur INTO dep;

CLOSE cur;

RETURN dep;

END get\_department;

FUNCTION get\_department(loc\_id departments.location\_id%type) RETURN departments%ROWTYPE IS

CURSOR cur IS SELECT \* FROM departments WHERE location\_id = loc\_id;

dep departments%ROWTYPE;

BEGIN

OPEN cur;

FETCH cur INTO dep;

CLOSE cur;

RETURN dep;

END get\_department;

FUNCTION get\_department(dep\_id CHAR) RETURN departments%ROWTYPE IS

CURSOR cur IS SELECT \* FROM departments WHERE department\_id = dep\_id;

dep departments%ROWTYPE;

BEGIN

OPEN cur;

FETCH cur INTO dep;

CLOSE cur;

RETURN dep;

END get\_department;

FUNCTION get\_department(dep\_id departments.department\_id%type) RETURN VARCHAR2 IS

CURSOR cur IS SELECT \* FROM departments WHERE department\_id = dep\_id;

dep departments%ROWTYPE;

x VARCHAR(50);

BEGIN

OPEN cur;

FETCH cur INTO dep;

CLOSE cur;

x := 'Query berhasil';

RETURN x;

END get\_department;

PROCEDURE del\_department(dep\_id departments.department\_id%type) IS

BEGIN

DELETE FROM Departments where department\_id = dep\_id;

DBMS\_OUTPUT.PUT\_LINE('Berhasil dihapus');

END del\_department;

PROCEDURE del\_department(dep\_name departments.department\_name%type) IS

BEGIN

DELETE FROM Departments where department\_id = dep\_name;

DBMS\_OUTPUT.PUT\_LINE('Berhasil dihapus');

END del\_department;

PROCEDURE del\_department(loc\_id departments.location\_id%type) IS

BEGIN

DELETE FROM Departments where department\_id = loc\_id;

DBMS\_OUTPUT.PUT\_LINE('Berhasil dihapus');

END del\_department;

END pkg\_department;

/

set serveroutput on

begin

DBMS\_OUTPUT.PUT\_LINE(pkg\_department.get\_department(205,1700).department\_name);

END;

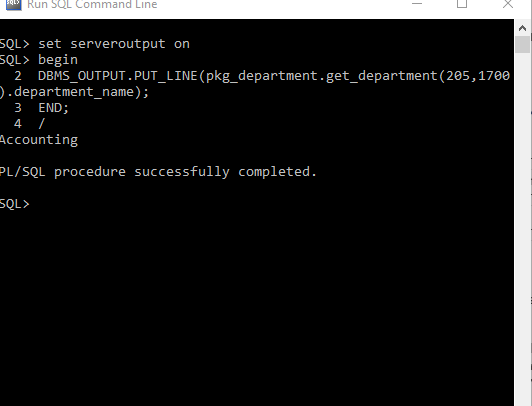
/

Pengamatan

1. Bisa, karena tidak ada yang menyimpan parameter dengan loc\_id .

2. Bisa, karena tidak ada parameter yang menyimpan dep\_id dengan tipe datachar.

3. Bisa, karena return yang di kembalikan berbeda.



CREATE TABLE RATES

( CURRENCY VARCHAR2(10),

PERIOD DATE, RATE NUMBER,

CONSTRAINT PK\_RATES PRIMARY KEY (CURRENCY, PERIOD) ENABLE

);

INSERT INTO RATES VALUES('IDR', '21-JAN-14', '12860');

CREATE OR REPLACE PACKAGE PKG\_SALARY IS

kurs NUMBER:=1;

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER;

PROCEDURE PRINT\_SALARY;

END PKG\_SALARY;

/

CREATE OR REPLACE PACKAGE BODY PKG\_SALARY IS

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER IS

BEGIN

RETURN(kurs\*val\_currency);

END CONVERT;

PROCEDURE PRINT\_SALARY IS

CURSOR cur IS SELECT employee\_id, first\_name||' '||last\_name nama, salary FROM employees;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('DAFTAR GAJI PEGAWAI DALAM RUPIAH');

DBMS\_OUTPUT.PUT\_LINE('ID NAMA GAJI');

FOR i IN cur LOOP

DBMS\_OUTPUT.PUT\_LINE(i.employee\_id||' '||i.nama||' '||CONVERT(i.salary));

END LOOP;

END PRINT\_SALARY;

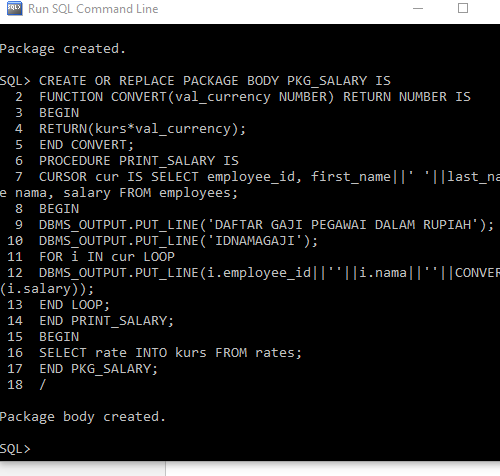
BEGIN

SELECT rate INTO kurs FROM rates;

END PKG\_SALARY;

/

pengamatan

1. Error

.

CREATE OR REPLACE PACKAGE PKG\_SALARY IS

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER;

PROCEDURE PRINT\_SALARY;

END PKG\_SALARY;

/

CREATE OR REPLACE PACKAGE BODY PKG\_SALARY IS

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER IS

kurs NUMBER:=1;

BEGIN

RETURN(kurs\*val\_currency);

END CONVERT;

PROCEDURE PRINT\_SALARY IS

CURSOR cur IS SELECT employee\_id, first\_name||' '||last\_name nama, salary FROM employees;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('DAFTAR GAJI PEGAWAI DALAM RUPIAH');

DBMS\_OUTPUT.PUT\_LINE('ID NAMA GAJI');

FOR i IN cur LOOP

DBMS\_OUTPUT.PUT\_LINE(i.employee\_id||' '||i.nama||' '||CONVERT(i.salary));

END LOOP;

END PRINT\_SALARY;

BEGIN

SELECT rate INTO kurs FROM rates;

END PKG\_SALARY;

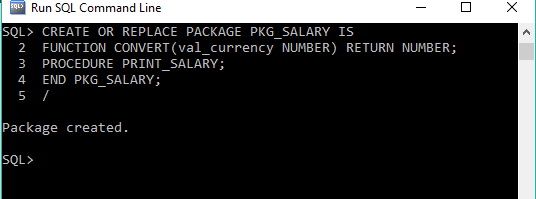
/

Pengamatan

Langkahnya, update setelah itu commit pada sesi 1.

Terus di sesi dua menyelek, dan berubah semua.

1. Akan Terupdate semua.



**TUGAS AKHIR**

CREATE OR REPLACE PACKAGE PKG\_VOLUME IS

tinggi NUMBER := 9;

FUNCTION volume\_balok(panjang NUMBER, lebar NUMBER) RETURN

NUMBER;

FUNCTION volume\_balok(panjang NUMBER, lebar NUMBER, tinggi NUMBER) RETURN

NUMBER;

FUNCTION volume\_tabung(jari\_jari NUMBER) RETURN NUMBER;

FUNCTION volume\_tabung(jari\_jari NUMBER, tinggi NUMBER) RETURN NUMBER;

END pkg\_volume;

/

CREATE OR REPLACE PACKAGE BODY PKG\_VOLUME IS

FUNCTION volume\_balok(panjang NUMBER, lebar NUMBER) RETURN

NUMBER

IS

BEGIN

RETURN panjang\*lebar\*tinggi;

END volume\_balok;

FUNCTION volume\_balok(panjang NUMBER, lebar NUMBER, tinggi NUMBER) RETURN

NUMBER

IS

BEGIN

RETURN panjang\*lebar\*tinggi;

END volume\_balok;

FUNCTION volume\_tabung(jari\_jari NUMBER) RETURN

NUMBER

IS

BEGIN

RETURN 3.14\*jari\_jari\*tinggi;

END volume\_tabung;

FUNCTION volume\_tabung(jari\_jari NUMBER, tinggi NUMBER) RETURN

NUMBER

IS

BEGIN

RETURN 3.14\*jari\_jari\*tinggi;

END volume\_tabung;

END pkg\_volume;

/

set serveroutpun on

begin

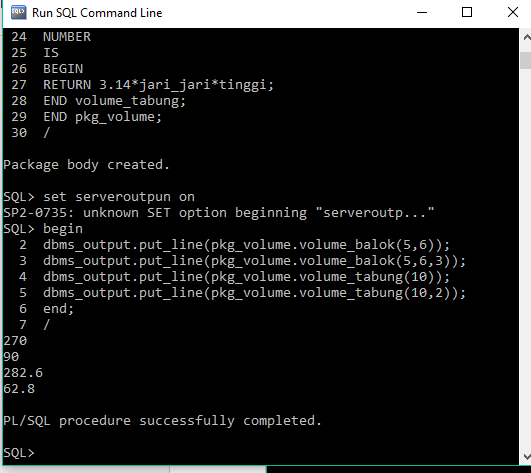
dbms\_output.put\_line(pkg\_volume.volume\_balok(5,6));

dbms\_output.put\_line(pkg\_volume.volume\_balok(5,6,3));

dbms\_output.put\_line(pkg\_volume.volume\_tabung(10));

dbms\_output.put\_line(pkg\_volume.volume\_tabung(10,2));

end;

/

2. CREATE TABLE RATES

( CURRENCY VARCHAR2(10),

PERIOD DATE, RATE NUMBER,

CONSTRAINT PK\_RATES PRIMARY KEY (CURRENCY, PERIOD) ENABLE

);

INSERT INTO RATES VALUES('IDR', sysdate, '12860');

CREATE OR REPLACE PACKAGE PKG\_SALARY IS

kurs NUMBER:=1;

cur\_Date DATE := sysdate;

cur\_currency VARCHAR2(10) := 'IDR';

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER;

PROCEDURE PRINT\_SALARY;

END PKG\_SALARY;

/

CREATE OR REPLACE PACKAGE BODY PKG\_SALARY IS

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER IS

BEGIN

RETURN(kurs\*val\_currency);

END CONVERT;

PROCEDURE PRINT\_SALARY IS

CURSOR cur IS SELECT employee\_id, first\_name||' '||last\_name nama, salary FROM employees;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('DAFTAR GAJI PEGAWAI DALAM RUPIAH');

DBMS\_OUTPUT.PUT\_LINE('ID NAMA GAJI');

FOR i IN cur LOOP

DBMS\_OUTPUT.PUT\_LINE(i.employee\_id||' '||i.nama||' '||CONVERT(i.salary));

END LOOP;

END PRINT\_SALARY;

BEGIN

SELECT rate INTO kurs FROM rates WHERE period=cur\_Date;

END PKG\_SALARY;

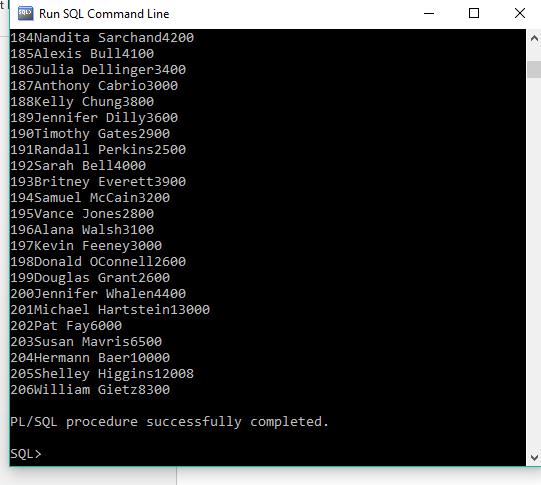
/

SET SERVEROUTPUT ON

BEGIN

PKG\_SALARY.PRINT\_SALARY;

END;

/

3. CREATE OR REPLACE PACKAGE PKG\_SALARY IS

cur\_Date DATE := sysdate;

cur\_currency VARCHAR2(10) := 'IDR';

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER;

PROCEDURE PRINT\_SALARY;

END PKG\_SALARY;

/

CREATE OR REPLACE PACKAGE BODY PKG\_SALARY IS

kurs NUMBER;

FUNCTION CONVERT(val\_currency NUMBER) RETURN NUMBER IS

BEGIN

RETURN(kurs\*val\_currency);

END CONVERT;

PROCEDURE PRINT\_SALARY IS

CURSOR cur IS SELECT employee\_id, first\_name||' '||last\_name nama, salary FROM employees;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('DAFTAR GAJI PEGAWAI DALAM RUPIAH');

DBMS\_OUTPUT.PUT\_LINE('ID NAMA GAJI');

FOR i IN cur LOOP

DBMS\_OUTPUT.PUT\_LINE(i.employee\_id||' '||i.nama||' '||CONVERT(i.salary));

END LOOP;

END PRINT\_SALARY;

BEGIN

kurs := 0;

SELECT rate INTO kurs FROM rates WHERE period=cur\_Date;

END PKG\_SALARY;

/

SET SERVEROUTPUT ON

BEGIN

pkg\_salary.print\_salary;

END;

/ 