

Stored Procedure – Advance

The screenshot displays the Oracle SQL Developer interface. On the left, the 'Connections' pane shows a connection to 'SagaraDB'. The 'Reports' pane lists various report types. The main 'Worksheet' pane contains a PL/SQL script for a procedure named 'increase_salaries'. The script is as follows:

```
1 create or replace procedure increase_salaries (v_salary_increase in number, v_department_id pls_integer) as
2 cursor c_emps is select * from employees_copy where department_id = v_department_id for update;
3 v_old_salary number;
4 begin
5 for r_emp in c_emps loop
6   v_old_salary := r_emp.salary;
7   r_emp.salary := r_emp.salary * v_salary_increase + r_emp.salary * nvl(r_emp.commission_pct,0);
8   update employees_copy set row = r_emp where current of c_emps;
9   dbms_output.put_line('The salary of : ' || r_emp.employee_id
10                        || ' is increased from ' || v_old_salary || ' to ' || r_emp.salary);
11 end loop;
12 dbms_output.put_line('Procedure finished executing!');
13 end;
14
```

Below the script, the 'Script Output' pane shows the message: 'Task completed in 0.05 seconds'. At the bottom of the window, a status bar indicates: 'Procedure INCREASE_SALARIES compiled'.

Oracle Connections

- SagaraDB
 - Tables (Filtered)
 - Views
 - Indexes
 - Packages
 - Procedures
 - ADJUST_SALARY
 - GETDBUSERBYUSERID
 - INCREASE_SALARIES
 - V_SALARY_INCREASE
 - V_DEPARTMENT_ID
 - INSERTSTUDENT
 - PRINT
 - Functions
 - Operators
 - Queues
 - Queues Tables

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Worksheet

```

6      v_old_salary := r_emp.salary;
7      r_emp.salary := r_emp.salary * v_salary_increase + r_emp.salary * nvl(r_emp.
8      update employees_copy set row = r_emp where current of c_emps;
9      dbms_output.put_line('The salary of : '|| r_emp.employee_id
10         || ' is increased from '||v_old_salary||' to '||r_emp.salary);
11  end loop;
12  dbms_output.put_line('Procedure finished executing!');
13 end;
14
15
16
17 BEGIN
18 increase_salaries;
19 END;
20

```

Script Output

Task completed in 0.242 seconds

Error report -

ORA-06550: line 2, column 1:
 PLS-00306: wrong number or types of arguments in call to 'INCREASE_SALARIES'
 ORA-06550: line 2, column 1:
 PL/SQL: Statement ignored

Oracle Connections

- SagaraDB
 - Tables (Filtered)
 - Views
 - Indexes
 - Packages
 - Procedures
 - ADJUST_SALARY
 - GETDBUSERBYUSERID
 - INCREASE_SALARIES
 - V_SALARY_INCREASE
 - V_DEPARTMENT_ID
 - INSERTSTUDENT
 - PRINT
 - Functions
 - Operators
 - Queues
 - Queues Tables

Reports

- All Reports
- Analytic View Reports

Worksheet

```

1 creat
2 cu
3 v_
4 begin
5 fo
6 v
7 r
8 u
9 d
10
11 en
12 db
13 end;
14

```

The screenshot displays the Oracle SQL Developer environment. On the left, the 'Connections' pane shows a tree view of the 'SagaraDB' database schema, including tables, views, indexes, packages, and procedures. The 'Procedures' folder is expanded, showing a list of procedures: ADJUST_SALARY, GETDBUSERBYUSERID, INCREASE_SALARIES, V_SALARY_INCREASE, V_DEPARTMENT_ID, INSERTSTUDENT, and PRINT. The 'INCREASE_SALARIES' procedure is selected. Below the 'Connections' pane is the 'Reports' pane, which lists various report types: All Reports, Analytic View Reports, Data Dictionary Reports, Data Modeler Reports, OLAP Reports, TimesTen Reports, and User Defined Reports.

The main workspace is divided into two panes. The top pane, titled 'Worksheet', contains a PL/SQL script with the following code:

```
1 SET SERVEROUTPUT ON;
2 begin
3 PRINT('SALARY INCREASE STARTED!..');
4 INCREASE_SALARIES(1.15,90);
5 PRINT('SALARY INCREASE FINISHED!..');
6 end;
```

The bottom pane, titled 'Script Output', shows the results of the script execution. It indicates that the task was completed in 0.062 seconds. The output text is as follows:

```
SALARY INCREASE STARTED!..
The salary of : 100 is increased from 27600 to 31740
The salary of : 101 is increased from 19550 to 22482.5
The salary of : 102 is increased from 19550 to 22482.5
Procedure finished executing!
SALARY INCREASE FINISHED!..
```

The screenshot displays the Oracle SQL Developer environment. On the left, the 'Connections' pane shows a tree view of the 'SagaraDB' database schema, including tables, views, indexes, packages, and procedures. The 'Procedures' folder is expanded, showing a list of procedures including 'ADJUST_SALARY', 'GETDBUSERBYUSERID', 'INCREASE_SALARIES', 'V_SALARY_INCREASE', 'V_DEPARTMENT_ID', 'INSERTSTUDENT', and 'PRINT'. The 'Reports' pane at the bottom left shows a list of report types: 'All Reports', 'Analytic View Reports', 'Data Dictionary Reports', 'Data Modeler Reports', 'OLAP Reports', 'TimesTen Reports', and 'User Defined Reports'.

The main workspace is divided into two panes: 'Worksheet' and 'Query Builder'. The 'Worksheet' pane contains a PL/SQL script with the following code:

```
1 SET SERVEROUTPUT ON;  
2 begin  
3 PRINT('SALARY INCREASE STARTED!..');  
4 INCREASE_SALARIES(1.50,60);  
5 PRINT('SALARY INCREASE FINISHED!..');  
6 end;
```

The 'Script Output' pane at the bottom right shows the results of the script execution. It indicates that the task completed in 0.058 seconds and displays the following output:

```
SALARY INCREASE STARTED!..  
The salary of : 103 is increased from 9000 to 13500  
The salary of : 104 is increased from 6000 to 9000  
The salary of : 105 is increased from 4800 to 7200  
The salary of : 106 is increased from 4800 to 7200  
The salary of : 107 is increased from 4200 to 6300  
Procedure finished executing!  
SALARY INCREASE FINISHED!..
```

OUT Param

The screenshot displays the Oracle SQL Developer environment. On the left, the 'Connections' pane shows a tree view of the 'SagaraDB' database schema, including tables, views, indexes, packages, and procedures. The 'Procedures' folder is expanded, showing a list of procedures: ADJUST_SALARY, GETDBUSERBYUSERID, INCREASE_SALARIES, V_SALARY_INCREASE, V_DEPARTMENT_ID, INSERTSTUDENT, and PRINT. The 'Reports' pane at the bottom left shows a list of report types: All Reports, Analytic View Reports, Data Dictionary Reports, Data Modeler Reports, OLAP Reports, TimesTen Reports, and User Defined Reports.

The main workspace is titled 'Worksheet' and 'Query Builder'. It contains a PL/SQL procedure named 'increase_salaries'. The procedure is defined as follows:

```
1 create or replace procedure increase_salaries
2   (v_salary_increase in out number, v_department_id pls_integer, v_affected_employee_count out number) as
3   cursor c_emps is select * from employees_copy where department_id = v_department_id for update;
4   v_old_salary number;
5   v_sal_inc number := 0;
6 begin
7   v_affected_employee_count := 0;
8   for r_emp in c_emps loop
9     v_old_salary := r_emp.salary;
10    r_emp.salary := r_emp.salary * v_salary_increase + r_emp.salary * nvl(r_emp.commission_pct,0);
11    update employees_copy set row = r_emp where current of c_emps;
12    dbms_output.put_line('The salary of : ' || r_emp.employee_id
13                        || ' is increased from ' || v_old_salary || ' to ' || r_emp.salary);
14    v_affected_employee_count := v_affected_employee_count + 1;
15    v_sal_inc := v_sal_inc + v_salary_increase + nvl(r_emp.commission_pct,0);
16  end loop;
17  v_salary_increase := v_sal_inc / v_affected_employee_count;
18  dbms_output.put_line('Procedure finished executing!');
19 end;
```

The screenshot displays the Oracle SQL Developer environment. On the left, the 'Connections' pane shows a connection to 'SagaraDB'. Below it, the 'Reports' pane lists various report types. The main workspace is divided into two panes: 'Worksheet' and 'Query Builder'. The 'Worksheet' pane contains a PL/SQL procedure script. The 'Query Builder' pane is empty. Below the main workspace, the 'Script Output' pane shows the results of the procedure execution.

```
1 declare
2   v_sal_inc number := 1.2;
3   v_aff_emp_count number;
4 begin
5   PRINT('SALARY INCREASE STARTED!..');
6   INCREASE_SALARIES(v_sal_inc,80,v_aff_emp_count);
7   PRINT('The affected employee count is : ' || v_aff_emp_count);
8   PRINT('The average salary increase is : ' || v_sal_inc || ' percent!..');
9   PRINT('SALARY INCREASE FINISHED!..');
10 end;
```

Task completed in 0.047 seconds

The salary of : 176 is increased from 8000 to 12040
The salary of : 177 is increased from 8400 to 11760
The salary of : 179 is increased from 6200 to 8060
Procedure finished executing!
The affected employee count is : 34
The average salary increase is : 1.425 percent!..
SALARY INCREASE FINISHED!..