**Modular tests for database functionality**

It is assumed that you have already followed all the instructions in the LDMS\_DB.docx file.

All the functionality stated in the task is implemented by functions and procedures of the PKG\_EMP\_SRV package, which you have already created.

All the functions and procedures listed below can be accessed using SQL and PL/SQL. In my case, using the Oracle REST Data Services (ORDS) environment and APEX, I opened the PKG\_EMP\_SRV package for access via the REST API.

Be careful and accurate when testing functionality via REST API, as in this case all functionality restricting user actions is disabled.

**--Inserting new row into EMP\_DATA**

-- using PL/SQL function

**declare** v\_ret **number**; **begin** v\_ret := PKG\_EMP\_SRV.f\_add\_emp(**null**,'Alex Worker', 'Employee',**null**,**sysdate**,148000,1); **end**;

-- using procedure

**begin** PKG\_EMP\_SRV.p\_add\_emp(**null**,'Alex Newman', 'Employee',**null**,**sysdate**,148000,1); **end**;

-- using REST API from browser

[https://apex.**oracle**.com/pls/apex/alekstar/pkg\_emp\_srv.p\_add\_emp?p\_ename=Test **Record**&p\_job=homeless&p\_sal=0&p\_dept\_id=1](https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_add_emp?p_ename=Test%20Record&p_job=homeless&p_sal=0&p_dept_id=1)

**-- Displaying the DEPTs report**

-- if p\_dept\_id is null then you'll get all list EMP\_DATA

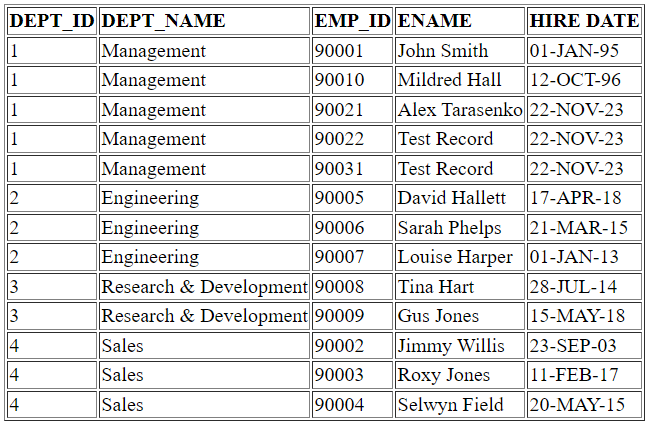
-- using PL/SQL

**begin** PKG\_EMP\_SRV.p\_dept\_rep(p\_dept\_id => **null**); **end**;

**begin** PKG\_EMP\_SRV.p\_dept\_rep(p\_dept\_id => 1); **end**;

-- Using REST API report

[https://apex.**oracle**.com/pls/apex/alekstar/pkg\_emp\_srv.p\_dept\_rep?p\_dept\_id=](https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_dept_rep?p_dept_id=)



**-- Displaying the employee's salary**

-- using PL/SQL

**begin** PKG\_EMP\_SRV.p\_return\_sal(p\_emp\_id => 90001); **end**;

------------------

*Employee EMP\_ID = 90001 Salary = 100000*

--================

--Using REST API

[https://apex.**oracle**.com/pls/apex/alekstar/pkg\_emp\_srv.p\_return\_sal?p\_emp\_id=90001](https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_return_sal?p_emp_id=90001)

*Employee EMP\_ID = 90001 Salary = 100000*

**-- Changing employees salary by a percentage**

**begin** PKG\_EMP\_SRV.p\_change\_sal(p\_emp\_id => 90001,p\_percent => 20); **end**;

------------------

*EMP salary updated. EMP\_ID = 90001* ***New*** *salary = 120000*

------------------

**begin** PKG\_EMP\_SRV.p\_change\_sal(p\_emp\_id => 90001,p\_percent => -25); **end**;

------------------

*EMP salary updated. EMP\_ID = 90001* ***New*** *salary = 90000*

-- This functionality can also be accessed from the REST API

[https://apex.**oracle**.com/pls/apex/alekstar/pkg\_emp\_srv.p\_change\_sal?p\_emp\_id=90001&p\_percent=20](https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_change_sal?p_emp_id=90001&p_percent=20)

**-- Transfering to another DEPT**

**begin** PKG\_EMP\_SRV.p\_emp\_transfer(p\_emp\_id => 90001,p\_new\_dept => 2); **end**;

------------------

*Employee transfered. EMP\_ID = 90001* ***New*** *DEPT\_ID = 2*

--=====================

-- back to origin DEPT

**begin** PKG\_EMP\_SRV.p\_emp\_transfer(p\_emp\_id => 90001,p\_new\_dept => 1); **end**;

------------------

*Employee transfered. EMP\_ID = 90001* ***New*** *DEPT\_ID = 1*

-- This functionality can also be accessed from the REST API

[https://apex.**oracle**.com/pls/apex/alekstar/pkg\_emp\_srv.p\_emp\_transfer?p\_emp\_id=90001&p\_new\_dept=2](https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_emp_transfer?p_emp_id=90001&p_new_dept=2)

**-- Displaying the total of Employee Salary for a Department**

-- if p\_dept\_id is null then you'll get all list EMP\_DATA

-- using PL/SQL

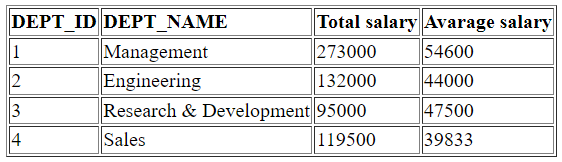
**begin** PKG\_EMP\_SRV.p\_sal\_rep(p\_dept\_id => **null**); **end**;

**begin** PKG\_EMP\_SRV.p\_sal\_rep(p\_dept\_id => 1); **end**;

-- Using REST API report

[https://apex.**oracle**.com/pls/apex/alekstar/pkg\_emp\_srv.p\_sal\_rep?p\_dept\_id=](https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_sal_rep?p_dept_id=)

[https://apex.**oracle**.com/pls/apex/alekstar/pkg\_emp\_srv.p\_sal\_rep?p\_dept\_id=1](https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_sal_rep?p_dept_id=1)



**-- You can also perform an express-test, which includes all necessary operations**

-- using PL/SQL

**begin** PKG\_EMP\_SRV.p\_utest; **end**;

-- Using REST API

<https://apex.oracle.com/pls/apex/alekstar/pkg_emp_srv.p_utest>

