****

**College of Engineering and Information Technology**

Database Administration – INT321

Lab # 2 Model Answer

Consider the Employees, and Department table shown below

**Company Database**

**Employee**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Empno** | **Ename** | **Job** | **MGR** | **Hiredate** | **Sal** | **Comm** | **DeptNo** |
| 7839 | King | President |  | 17-Nov-81 | 5000 |  | 10 |
| 7698 | Blake | Manager | 7839 | 01-May-81 | 2850 |  | 30 |
| 7782 | Clark | Manager | 7839 | 09-Jun-81 | 2450 |  | 10 |
| 7566 | Johns | Manager | 7839 | 02-Apr-81 | 2950 |  | 20 |
| 7654 | Martin | Salesman | 7698 | 28-Sep-81 | 1250 | 1400 | 30 |
| 7499 | Allen | Salesman | 7698 | 20-Feb-81 | 1600 | 300 | 30 |
| 7844 | Turner | Salesman | 7698 | 08-Sep-81 | 1500 | 0 | 30 |
| 7900 | James | Clerk | 7698 | 03-Dec-81 | 950 |  | 30 |
| 7521 | Ward | Salesman | 7698 | 22-Feb-81 | 1250 | 500 | 30 |
| 7902 | Ford | Analyst | 7566 | 03-Dec-81 | 3000 |  | 20 |
| 7369 | Smith | Clerk | 7902 | 17-Dec-80 | 800 |  | 20 |
| 7788 | Scott | Analyst | 7566 | 09-Dec-82 | 3000 |  | 20 |
| 7876 | Adams | Clerk | 7788 | 12-Jan-83 | 1100 |  | 20 |
| 7934 | Miller | Clerk | 7782 | 23-Jan-82 | 1300 |  | 10 |

**Department**

|  |  |  |
| --- | --- | --- |
| **DeptNo** | **Dname** | **Location** |
| 10 | Accounting | Ajman |
| 20 | Research | Sharjah |
| 30 | Sales | Abu Dhabi |
| 40 | Operations | Dubai |

1. Create a PL/SQL block to declare a cursor EMP\_CUR to select the employee name, salary, and hire date from the EMPLOYEES table. Process each row from the cursor, and if the salary is greater than 2,000 and the hire date is greater than 01-FEB-1981, display the employee name, salary, and hire date in the screen.

**declare**

**cursor EMP\_CUR is select ename, sal, hiredate from employees;**

**emp\_cur\_var EMP\_CUR%rowtype;**

**begin**

**open EMP\_CUR;**

**loop**

**fetch EMP\_CUR into emp\_cur\_var;**

**if (emp\_cur\_var.sal > 2000 and emp\_cur\_var.hiredate > '01/02/1981') then**

**dbms\_output.put\_line(emp\_cur\_var.ename ||' '||emp\_cur\_var.sal||' '||emp\_cur\_var.hiredate);**

**end if;**

**exit when EMP\_CUR%notfound;**

**end loop;**

**close EMP\_CUR;**

**end;**

**/**

1. Create a PL/SQL block (use cursor) to promote clerks who earn more than 1,000 to SR. CLERK and increase their salary by 10%. Use the Employees table for this practice. Verify the results by querying on the Employees table.

#### Solution

**declare**

**cursor CLERK is select sal,job from employees where job='Clerk'**

**for update;**

**clerkrec clerk%rowtype;**

**begin**

**open CLERK;**

**loop**

**fetch CLERK into clerkrec;**

**exit when clerk%notfound;**

**if clerkrec.job = 'Clerk' and clerkrec.sal > 1000 then**

**update employees**

**set job = 'SR Clerk', sal = sal\*1.1**

**where current of CLERK;**

**end if;**

**end loop;**

**end;**

**/**

3. Create a PL/SQL block that does the following:

read the department number from the keyboard, The program then display the employee name, salary and MANAGER ID of the employees working in that department. The program should also display the message “promote this employee”, If the salary of the employee is less than 2500 and the manager ID equal 7839 otherwise display “ no need for promotion” (use cursor for processing of record).

**declare**

**DeptNumber number:=&DeptNumber;**

**cursor emp\_cur is select ename, sal, mgr from employees where deptno=DeptNumber;**

**emp\_cur\_var emp\_cur%rowtype;**

**begin**

**open emp\_cur;**

**loop**

**fetch emp\_cur into emp\_cur\_var;**

**exit when emp\_cur%notfound;**

**if emp\_cur\_var.mgr=7839 and emp\_cur\_var.sal<2500 then**

**dbms\_output.put\_line(emp\_cur\_var.ename||' '||emp\_cur\_var.sal||' '||emp\_cur\_var.mgr||' Promote this employee');**

**else**

**dbms\_output.put\_line(emp\_cur\_var.ename||' '||emp\_cur\_var.sal||' '||emp\_cur\_var.mgr||' No need for promotion');**

**end if;**

**end loop;**

**end;**

**/**

1. Create a PL/SQL block that declares a cursor called DATE\_CUR. Pass a parameter of DATE data type to the cursor and print the details of all employees who have joined after that date.

**DECLARE**

**CURSOR DATE\_CURSOR(JOIN\_DATE DATE) IS**

**SELECT employee\_id,last\_name,hire\_date FROM employees**

**WHERE HIRE\_DATE >JOIN\_DATE ;**

**V\_EMPNO employees.employee\_id%TYPE;**

**V\_ENAME employees.last\_name%TYPE;**

**V\_HIREDATE employees.hire\_date%TYPE;**

**V\_DATE employees.hire\_date%TYPE := '&P\_HIREDATE';**

**BEGIN**

**OPEN DATE\_CURSOR(V\_DATE);**

**LOOP**

**FETCH DATE\_CURSOR INTO V\_EMPNO,V\_ENAME,V\_HIREDATE;**

**EXIT WHEN DATE\_CURSOR%NOTFOUND;**

**DBMS\_OUTPUT.PUT\_LINE (V\_EMPNO || ' ' || V\_ENAME || ' ' ||**

**V\_HIREDATE);**

**END LOOP;**

**END;**

**/**