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**College of Engineering and Information Technology**

Database Administration – INT321

Lab # 3 Model Answer

**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 |

1. Write a PL/SQL statements that Create a stored procedure named ADD\_JOB to insert a new job into the JOBS table. The procedure has 4 parameters that correspond to the job\_id, job\_title, min\_salary, and max\_salary.

a. The jobs table description is as follows (job\_id number, job\_title varchare(20), min\_sal number, max\_sal number).

ANS:

Create table jobs (job\_id number(4) Primary key , job\_title varchar2(20), min\_sal number(10,2), max\_sal number (10,2));

b. Write a PL/SQl program (block) that read 4 variable from the keyboard and call the procedure ADD\_Job to insert a new job in the table Jobs.

/\* The procedure\*/

CREATE OR REPLACE PROCEDURE ADD\_JOB (job\_id1 IN number, job\_title1 IN varchar2, min\_sal1 IN number, max\_sal1 IN number) AS

BEGIN

INSERT INTO Jobs (job\_id, job\_title, min\_sal, max\_sal) VALUES (job\_id1, job\_title1, min\_sal1, max\_sal1);

COMMIT;

END ADD\_JOB;

/\*The block that call the procedure\*/

DECLARE

job\_idp number(4):= &job\_idp;

job\_titlep varchar2(20):= &job\_titlep;

min\_salp number(10,2):= &min\_salp;

max\_salp number(10,2):= &max\_salp;

begin

ADD\_JOB(job\_idp, job\_titlep, min\_salp, max\_salp);

end;

1. Write a PL/SQL statements that Create a stored procedure named UPD\_JOB to modify a job in the JOBS table. The procedure receives two parameters that correspond to the Job\_id , and the job\_title.

Write a PL/SQl program (block) that read 2 variable from the keyboard and call the procedure UPD\_JOB to change the title of a job in the table Jobs.

ANS:

/\* The update job procedure\*/

CREATE OR REPLACE PROCEDURE UPDATE\_JOB (job\_id1 IN number, job\_title\_new IN varchar2) AS

BEGIN

Update Jobs set job\_title = job\_title\_new where job\_id = job\_id1;

COMMIT;

END UPDATE\_JOB;

/\* The block that call the update job\*/

DECLARE

job\_idp number(4):= &job\_idp;

job\_titlep varchar2(20):= &job\_titlep;

begin

UPDATE\_JOB(job\_idp, job\_titlep);

end;

1. Write a PL/SQL statements that Create a stored procedure named Del\_JOB to delete a job from the JOBS table. The procedure receives one parameters that correspond to the Job\_id.

Write a PL/SQl program (block) that read onevariable from the keyboard and call the procedure Del\_JOB to delete a job from the table Jobs.

ANS:

/\* The procedure Delete\_Job\*/

CREATE OR REPLACE PROCEDURE DELETE\_JOB (job\_id1 IN number) AS

BEGIN

DELETE FROM Jobs WHERE JOB\_ID = job\_id1;

COMMIT;

END DELETE\_JOB;

/\* The block that delete the job\*/

DECLARE

job\_idp number(4):= &job\_idp;

begin

DELETE\_JOB(job\_idp);

end;

1. Write PL/SQL statements that Create a stored function called ANNUAL\_Sal to return the annual salary by accepting one parameter: an employee’s number. The function should address NULL values because not all employees have commission.
   1. The function should first retrieve the monthly salary and the commission and then calculate the annual salary using the formula:
      1. (salary\*12) + (commission\*12)

ANS:

/\*The function\*/

create or replace function ANNUAL\_Sal (emp\_no number) return number as

salary Number(10,2);

commision Number(10,2);

begin

select sal, comm into salary,commision from employee

where emp\_no = empno;

if commision is null then

return salary\*12;

else

return (salary\*12 + commision\*12);

end if;

exception

when no\_data\_found then

dbms\_output.put\_line ('The employee is not found');

when others then

return ('Error in running show\_description');

end ANNUAL\_Sal;

* 1. Write an SQL statement that displays employee number, employee name, and annual salary for all employees in the table Employees. Use the function ANNUAL\_Sal for the calculation of the annual salary.

ANS:

/\*The select statement\*/

select empno, ENAME, Annual\_sal(empno) as annualSalary from employee;