C.B.PATEL COMPUTER COLLEGE
Concepts Of RDBMS

Practical Assignment

Create DEPT and EMP with the following structures with appropriate constraints.

dept(deptno,dname,location)
emp(empno,ename,job,mgrno,hiredate,sal,comm,deptno)

Constraints on tables :
Primary key : dept(deptno)
Primary key : emp(empno)
Foreign key : emp(deptno) (referential integrity)

Enter records in DEPT as given below.

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

Enter records in EMP as given below

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7839	KING	PRESIDENT		17-NOV-81	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-87	1100		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

CREATE dept table.

CREATE TABLE dept(
  deptno NUMBER(2,0) PRIMARY KEY,
  dname VARCHAR2(14),
  loc   VARCHAR2(13));

Insert following records in dept table.
INSERT INTO dept VALUES(10, 'ACCOUNTING', 'NEW YORK');
INSERT INTO dept VALUES(20, 'RESEARCH', 'DALLAS');
INSERT INTO dept VALUES(30, 'SALES', 'CHICAGO');
INSERT INTO dept VALUES(40, 'OPERATIONS', 'BOSTON');

CREATE emp table.
CREATE TABLE emp(
  empno   NUMBER(4,0) PRIMARY KEY,
  ename   VARCHAR2(10),
  job   VARCHAR2(9),
  mgr   NUMBER(4,0),
  hiredate DATE,
  sal   NUMBER(7,2),
  comm   NUMBER(7,2),
  deptno NUMBER(2,0) REFERENCES dept (deptno));

Insert following records in emp table.
INSERT INTO emp VALUES (7369,'SMITH','CLERK',7902,'17-DEC-80',800,NULL,20);
INSERT INTO emp VALUES (7499,'ALLEN','SALESMAN',7698,'20-FEB-81',1600,300,30);
INSERT INTO emp VALUES (7521,'WARD','SALESMAN',7698,'22-FEB-81',1250,500,30);
INSERT INTO emp VALUES (7566,'JONES','MANAGER',7839,'02-APR-81',2975,NULL,20);
INSERT INTO emp VALUES (7654,'MARTIN','SALESMAN',7698,'28-SEP-81',1250,1400,30);
INSERT INTO emp VALUES (7698,'BLAKE','MANAGER',7839,'01-MAY-81',2850,NULL,30);
INSERT INTO emp VALUES (7782,'CLARK','MANAGER',7839,'09-JUN-81',2450,NULL,10);
INSERT INTO emp VALUES (7788,'SCOTT','ANALYST',7566,'19-APR-87',3000,NULL,20);
INSERT INTO emp VALUES (7839,'KING','PRESIDENT',NULL,'17-NOV-81',5000,NULL,10);
INSERT INTO emp VALUES (7844,'TURNER','SALESMAN',7698,'08-SEP-81',1500,0,30);
INSERT INTO emp VALUES (7876,'ADAMS','CLERK',7788,'23-MAY-87',1100,NULL,20);
INSERT INTO emp VALUES (7900,'JAMES','CLERK',7698,'03-DEC-81',950,NULL,30);
INSERT INTO emp VALUES (7902,'FORD','ANALYST',7566,'03-DEC-81',3000,NULL,20);
INSERT INTO emp VALUES (7934,'MILLER','CLERK',7782,'23-JAN-82',1300,NULL,10);

Solve the following queries.

(1) List all information about the employees in the EMP table.
(2) List all information about the departments in DEPT TABLE.
(3) List the employee number, name, job title, hire date of employees in department 10.
(4) Select the name and salary of all employees who are clerks.
(5) List the name, job title and salary of everyone hired in year 1993.
(6) List the department number and name for departments with numbers greater than or equal to 20.
(7) List the names of employees whose salaries are less than 3000.
(8) Select the name, salary and commission of employees whose commission is greater than their salary.
(9) List the names and employee numbers of managers who earn more than 5000. Display in alphabetic order by name.
(10) Select information about managers and the president from the table EMP. Order the result by department number.
(11) List the employees names that do not end in S.
(12) List the name, job and department of everyone whose name falls in the alphabetic range "C" to "E".
(13) List employee details working in department 20,30,40
(14) List of employees whose names start with T and ends with R.
(15) List of employees who do not get any commission.
(16) List the names and hire dates of the employees in department 20. Display the hire date formatted as '12/05/93'.
(17) How many months has the president worked for the company ? Round to the nearest whole number of months.
(18) List the names of employees whose hiredate is in the month of December.
(19) Display the name, monthly salary, yearly salary for all employees.
(20) Retrieve the analyst record with the hiredate formatted as the 3rd of December, 2008.
(21) List the names of the employees whose hiredate is in the month of December and year 1981 .
(22) List all employees names , jobs and a job classification.
Job classification : 1 for clerk, 2 for manager, ...
(23) Give SQL command to find the average annual salary per job in each department.
(24) In on query, count the number of people in department 30 who receive a salary and the number of people who receive a commission.
(25) Compute the average, minimum, maximum salaries of those group of employees having the job of clerk or manager.

(26) Display the department number of departments which have more than one clerk.

(27) Calculate the total compensation expense for each department for one year.

(28) What is the length of the longest employee name?

(29) Which employees earns less than 30% of the president's salary?

(30) List the employees whose names are the longest.

(31) Who was the last employee hired in each department.

(32) How many employees work in New York?

(33) Which employees work in New York?

(34) List the employees names and cities in which they work, order the list by city

(35) Find the number of different employees and number of departments.

(36) Determine the average salaries of employees.

(37) Find all employees working in department 10 other than king.

(38) List department number, department name, location and total commission paid and total salary of each departments