# DBMS Lab Assignment 1

## PROBLEM STATEMENTS

1. Create the tables as described below:

Tablename: **DEPT**

| Column Name | Datatype | Size | Attributes |
|-------------|----------|------|-------------|
| deptno | number | 2 | Primary Key |
| deptname | varchar2 | 30 | Not Null |
| location | varchar2 | 25 | |

Tablename: **EMP**

| Column Name | Datatype | Size | Attributes |
|-------------|----------|------|-------------|
| empno | number | 4 | Primary Key |
| ename | varchar2 | 30 | Not Null |
| job | varchar2 | 30 | Not Null |
| mgr | number | 4 | |
| hiredate | date | | |
| sal | number | 10 | |
| com | number | 8 | |
| deptno | number | 2 | Foreign Key |

2. Populate the tables created above with the following data:

Data for table **DEPT**

| deptno | deptname | location |
|--------|----------|----------|
| 10 | Accounting | Kolkata |
| 20 | Research | Chennai |
| 30 | Sales | Mumbai |
| 40 | Operations | New Delhi |

Data for table **EMP**

| empno | ename | job | mgr | hiredate | sal | com | deptno |
|-------|-------|-----|-----|----------|-----|-----|--------|
| 7369 | Smith | Clerk | 7902 | 17-Dec-2016 | 8000 | | 20 |
| 7499 | Allen | Salesman | 7698 | 20-Feb-2014 | 16000 | 300 | 30 |
| 7521 | Ward | Salesman | 7698 | 22-Feb-2017 | 12500 | 500 | 30 |
| 7566 | Jones | Manager | 7839 | 02-Apr-2020 | 29750 | | 20 |
| 7654 | Martin | Salesman | 7698 | 28-Sep-2019 | 12500 | 1400 | 30 |
| 7698 | Blake | Manager | 7839 | 01-May-2011 | 18500 | | 30 |
| 7782 | Clark | Manager | 7839 | 09-Jun-2012 | 24500 | | 10 |
| 7788 | Scott | Analyst | 7566 | 09-Dec-2014 | 30000 | | 20 |
| 7839 | King | President | | 17-Nov-2013 | 50000 | | 10 |
| 7844 | Turner | Salesman | 7698 | 08-Sep-2015 | 15000 | 0 | 30 |
| 7876 | Adams | Clerk | 7788 | 12-Jan-2016 | 11000 | | 20 |
| 7900 | James | Clerk | 7698 | 04-Dec-2018 | 9500 | | 30 |
| 7902 | Ford | Analyst | 7566 | 03-Dec-2014 | 30000 | | 20 |
| 7934 | Miller | Clerk | 7782 | 23-Jan-2012 | 13000 | | 10 |

3. Perform the following set of queries on the tables just created (DEPT and EMP):
   a. List the names of analysts and salesmen.
   b. List details of employees who have joined before 30-Sep-2014.
   c. List the names of employees who are not managers.
   d. List the names of employees whose employee numbers are 7521, 7839, 7934 or 7788.
   e. List employees not belonging to department 30, 40 or 10.
   f. List employee names for those who have joined between 30-jun and 31-Dec-2014.
   g. List the different designations in the company.
   h. List the names of employees who are not eligible for commission.
   i. List the name and designation of the employees who do not report to anybody.
   j. List the employees not assigned to any department.
   k. List the names of employees who are eligible for commission.
   l. List the employees whose names either start or end with "s".
   m. List the employees whose names have "i" as second character.
   n. List the number of employees working with the company.
   o. List the number of designations available in the EMP table.
   p. List the total salaries paid to the employees.
   q. List the maximum, minimum and average salary in the company.
   r. List maximum salary paid to a salesman.

4. Perform another set of following queries on those tables (DEPT and EMP):
   a. List the number of employees and average salary for employees in dept 20.
   b. List name, salary and PF amount of all employees. [PF is calculated as 10% of the basic salary]
   c. List the names of employees who are more than 5 years old in the company.
   d. List the employee details in ascending order of their basic salary.
   e. List the employee name and hiredate in the descending order of the hiredate.

f. List employee name, salary, PF, HRA, DA and gross salary; order the results in ascending order of the gross salary. [PF, HRA and DA are the 10%, 20% and 30% of the basic salary respectively. Gross salary can be calculated as (basic + DA + HRA − PF).]

g. List the department numbers and number of employees in each department.

h. List the department numbers and total salary payable in each department.

i. List the jobs and number of employees in each job. The result should be in the descending order of the number of employees.

j. List the total salary, maximum, minimum and average salary of the employees job-wise.

k. List the total salary, maximum, minimum and average salary of the employees job-wise for department 20.

l. List the job, total salary, maximum, minimum and average salary of the employees job-wise for department 30 and display only those rows having an average salary > 10000.