UNIVERSITY OF DELHI

BHASKARACHARYA COLLEGE OF APPLIED SCIENCES
BSC (HONS) COMPUTER SCIENCE
SEMESTER - 4

DATABASE MANAGEMENT SYSTEM

ADARSH PANDEY

2102002

Department and Employee schema:

```
mysql> desc department;
+----------+-------------+------+-----+-----------+-------+
| Field    | Type        | Null | Key | Default   | Extra |
+----------+-------------+------+-----+-----------+-------+
| Dno      | int         | NO   | PRI | NULL      |       |
| Dname    | varchar(50) | YES  |     | NULL      |       |
| Location | varchar(50) | YES  |     | New Delhi |       |
+----------+-------------+------+-----+-----------+-------+
3 rows in set (0.00 sec)

mysql> desc employee;
+----------------+--------------+------+-----+---------+-------+
| Field          | Type         | Null | Key | Default | Extra |
+----------------+--------------+------+-----+---------+-------+
| Eno            | char(3)      | NO   | PRI | NULL    |       |
| Ename          | varchar(50)  | NO   |     | NULL    |       |
| Job_type       | varchar(50)  | NO   |     | NULL    |       |
| SupervisionENO | char(3)      | YES  | MUL | NULL    |       |
| Hire_date      | date         | NO   |     | NULL    |       |
| Dno            | int          | YES  | MUL | NULL    |       |
| Commission     | decimal(10,2)| YES  |     | NULL    |       |
| Salary         | decimal(7,2) | NO   |     | NULL    |       |
+----------------+--------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

Query 1 :
Query to display Employee Name, Job, Hire Date, Employee Number; for each employee with the Employee Number appearing first.

Solution 1 :

```
mysql> select ENo, EName, Job_Type, Hire_Date from Employee;
+-----+---------+-----------+------------+
| ENo | EName   | Job_Type  | Hire_Date  |
+-----+---------+-----------+------------+
| 736 | Samarth | Clerk     | 1981-12-17 |
| 749 | Aman    | Sales_man | 1981-02-20 |
| 752 | Wasim   | Sales_man | 1981-02-22 |
| 756 | Jaya    | Manager   | 1981-04-02 |
| 765 | Manvi   | Sales_man | 1981-04-22 |
| 769 | Bhaskar | Manager   | 1981-05-01 |
| 778 | Chirag  | Manager   | 1981-06-09 |
| 783 | Kritika | President | 1981-11-17 |
| 784 | Tushar  | Sales_man | 1981-09-08 |
| 787 | Aditi   | Clerk     | 1983-01-12 |
| 788 | Shikha  | Analyst   | 1982-12-09 |
| 790 | Sheetal | Clerk     | 1981-12-03 |
| 792 | Nisha   | Analyst   | 1981-12-03 |
| 793 | Madhav  | Clerk     | 1982-01-23 |
+-----+---------+-----------+------------+
14 rows in set (0.03 sec)
```

Query 2 :
Query to display unique Jobs from the Employee Table.

Solution 2 :

```
mysql> select distinct Job_Type from Employee;
+-----------+
| Job_Type  |
+-----------+
| Clerk     |
| Sales_man |
| Manager   |
| President |
| Analyst   |
+-----------+
5 rows in set (0.03 sec)
```

Query 3 :
Query to display the Employee Name concatenated by a Job separated by a comma.

Solution 3 :

```
mysql> select concat(Ename,",",Job_Type) Name_JobType from employee;
+-------------------+
| Name_JobType      |
+-------------------+
| Samarth,Clerk     |
| Aman,Sales_man    |
| Wasim,Sales_man   |
| Jaya,Manager      |
| Manvi,Sales_man   |
| Bhaskar,Manager   |
| Chirag,Manager    |
| Kritika,President |
| Tushar,Sales_man  |
| Aditi,Clerk       |
| Shikha,Analyst    |
| Sheetal,Clerk     |
| Nisha,Analyst     |
| Madhav,Clerk      |
+-------------------+
14 rows in set (0.00 sec)
```

Query 4 :
Query to display all the data from the Employee Table. Separate each Column by a comma and name the said column as THE_OUTPUT.

Solution 4 :

```
mysql> select concat('',Eno,',', Ename,',', Job_type,',', SupervisionENO,',
', Hire_date,',', Dno,',',Commission,',', Salary) THE_OUTPUT from employee;

+-----------------------------------------------------+
| THE_OUTPUT                                          |
+-----------------------------------------------------+
| 736,Samarth,Clerk,790,1981-12-17,20,0.00,1000.00    |
| 749,Aman,Sales_man,769,1981-02-20,30,300.00,2000.00 |
| 752,Wasim,Sales_man,769,1981-02-22,30,500.00,1300.00|
| 756,Jaya,Manager,783,1981-04-02,20,0.00,2300.00     |
| 765,Manvi,Sales_man,784,1981-04-22,30,1400.00,1250.00|
| 769,Bhaskar,Manager,783,1981-05-01,30,0.00,2870.00  |
| 778,Chirag,Manager,783,1981-06-09,10,0.00,2900.00   |
| NULL                                                |
| 784,Tushar,Sales_man,769,1981-09-08,30,0.00,1450.00 |
| 787,Aditi,Clerk,778,1983-01-12,20,0.00,1150.00      |
| 788,Shikha,Analyst,756,1982-12-09,20,0.00,2850.00   |
| 790,Sheetal,Clerk,769,1981-12-03,30,0.00,950.00     |
| 792,Nisha,Analyst,756,1981-12-03,20,0.00,2600.00    |
| 793,Madhav,Clerk,788,1982-01-23,40,0.00,1300.00     |
+-----------------------------------------------------+
14 rows in set (0.00 sec)
```

Query 5 :
Query to display the Employee Name and Salary of all the employees earning more than $2850.

Solution 5 :

```
mysql> select Ename, Salary from Employee where (salary+commission) > 2850;

+---------+---------+
| Ename   | Salary  |
+---------+---------+
| Bhaskar | 2870.00 |
| Chirag  | 2900.00 |
| Kritika | 2950.00 |
+---------+---------+
3 rows in set (0.00 sec)
```

Query 6 :
Query to display Employee Name and Department Number for the Employee No= 79.

Solution 6 :

```
mysql> select Ename,Dno from employee where eno = 79;
+-------+------+
| Ename | Dno  |
+-------+------+
| Karn  |   30 |
+-------+------+
1 row in set (0.00 sec)
```

Query 7 :
Query to display Employee Name and Salary for all employees whose salary is not in the range of $1500 and $2850.

Solution 7 :

```
mysql> select Ename, salary from employee where salary not between 1500 and 2850;
+---------+---------+
| Ename   | salary  |
+---------+---------+
| Samarth | 1000.00 |
| Wasim   | 1300.00 |
| Manvi   | 1250.00 |
| Bhaskar | 2870.00 |
| Chirag  | 2900.00 |
| Kritika | 2950.00 |
| Tushar  | 1450.00 |
| Aditi   | 1150.00 |
| Karn    | 1200.00 |
| Sheetal |  950.00 |
| Madhav  | 1300.00 |
+---------+---------+
11 rows in set (0.00 sec)
```

Query 8 :
Query to display Employee Name and Department No. of all the employees in Dept 10 and Dept 30 in the alphabetical order by name.

Solution 8 :

```
mysql> select Ename, Dno from employee where dno=10 or dno=30 order by Ename;
+---------+------+
| Ename   | Dno  |
+---------+------+
| Aman    |   30 |
| Bhaskar |   30 |
| Chirag  |   10 |
| Karn    |   30 |
| Kritika |   10 |
| Manvi   |   30 |
| Sheetal |   30 |
| Tushar  |   30 |
| Wasim   |   30 |
+---------+------+
9 rows in set (0.00 sec)
```

Query 9 :
Query to display Name and Hire Date of every Employee who was hired in 1981.

Solution 9 :

```
mysql> select Ename, Hire_Date from Employee where year(hire_date) = 1981;
+---------+------------+
| Ename   | Hire_Date  |
+---------+------------+
| Samarth | 1981-12-17 |
| Aman    | 1981-02-20 |
| Wasim   | 1981-02-22 |
| Jaya    | 1981-04-02 |
| Manvi   | 1981-04-22 |
| Bhaskar | 1981-05-01 |
| Chirag  | 1981-06-09 |
| Kritika | 1981-11-17 |
| Tushar  | 1981-09-08 |
| Sheetal | 1981-12-03 |
| Nisha   | 1981-12-03 |
+---------+------------+
11 rows in set (0.01 sec)
```

Query 10 :
Query to display Name and Job of all employees who have not assigned a supervisor.

Solution 10 :

```
mysql> select Ename, Job_type from employee where supervisionEno is NULL;
+---------+-----------+
| Ename   | Job_type  |
+---------+-----------+
| Aman    | Sales_man |
| Kritika | President |
+---------+-----------+
2 rows in set (0.00 sec)
```

Query 11 :
Query to display the Name, Salary and Commission for all the employees who earn commission.

Solution 11 :

```
mysql> select Ename, Salary, Commission from employee where commission > 0.00;
+-------+---------+------------+
| Ename | Salary  | Commission |
+-------+---------+------------+
| Aman  | 2000.00 |     300.00 |
| Wasim | 1300.00 |     500.00 |
| Manvi | 1250.00 |    1400.00 |
+-------+---------+------------+
3 rows in set (0.00 sec)
```

Query 12 :
Sort the data in descending order of Salary and Commission.

Solution 12 :

```
mysql> select * from employee order by salary desc,commission desc;
+-----+---------+-----------+----------------+------------+------+------------+---------+
| Eno | Ename   | Job_type  | SupervisionENO | Hire_date  | Dno  | Commission | Salary  |
+-----+---------+-----------+----------------+------------+------+------------+---------+
| 783 | Kritika | President | NULL           | 1981-11-17 |   10 |       0.00 | 2950.00 |
| 778 | Chirag  | Manager   | 783            | 1981-06-09 |   10 |       0.00 | 2900.00 |
| 769 | Bhaskar | Manager   | 783            | 1981-05-01 |   30 |       0.00 | 2870.00 |
| 788 | Shikha  | Analyst   | 756            | 1982-12-09 |   20 |       0.00 | 2850.00 |
| 792 | Nisha   | Analyst   | 756            | 1981-12-03 |   20 |       0.00 | 2600.00 |
| 756 | Jaya    | Manager   | 783            | 1981-04-02 |   20 |       0.00 | 2300.00 |
| 749 | Aman    | Sales_man | NULL           | 1981-02-20 |   30 |     300.00 | 2000.00 |
| 784 | Tushar  | Sales_man | 769            | 1981-09-08 |   30 |       0.00 | 1450.00 |
| 752 | Wasim   | Sales_man | 769            | 1981-02-22 |   30 |     500.00 | 1300.00 |
| 793 | Madhav  | Clerk     | 788            | 1982-01-23 |   40 |       0.00 | 1300.00 |
| 765 | Manvi   | Sales_man | 784            | 1981-04-22 |   30 |    1400.00 | 1250.00 |
| 79  | Karn    | Clerk     | 769            | 1982-09-25 |   30 |       0.00 | 1200.00 |
| 787 | Aditi   | Clerk     | 778            | 1983-01-12 |   20 |       0.00 | 1150.00 |
| 736 | Samarth | Clerk     | 790            | 1981-12-17 |   20 |       0.00 | 1000.00 |
| 790 | Sheetal | Clerk     | 769            | 1981-12-03 |   30 |       0.00 |  950.00 |
+-----+---------+-----------+----------------+------------+------+------------+---------+
15 rows in set (0.00 sec)
```

Query 13 :
Query to display Name of all the employees where the third letter of their name is ‘A’.

Solution 13 :

```
mysql> select Ename from employee where ename like '__A%';
+---------+
| Ename   |
+---------+
| Aman    |
| Bhaskar |
+---------+
2 rows in set (0.01 sec)
```

Query 14 :
Query to display Name of all employees either have two ‘R’s or have two ‘A’s in their name and are either in Dept No = 30 or their Manger’s Employee No = 7788.

Solution 14 :

```
mysql> select EName from employee where ename like '%a%a%' or ename like '%r%r%'
and Dno = 30 or SupervisionEno = 7788;
+---------+
| EName   |
+---------+
| Samarth |
| Aman    |
| Jaya    |
| Bhaskar |
| Madhav  |
+---------+
5 rows in set (0.00 sec)
```

Query 15 :
Query to display Name, Salary and Commission for all employees whose Commission amount is greater than their Salary increased by 5%.

Solution 15 :

```
mysql> select ename, salary, commission from employee where commission >
 (salary+salary*.05);
+-------+---------+------------+
| ename | salary  | commission |
+-------+---------+------------+
| Manvi | 1250.00 |    1400.00 |
+-------+---------+------------+
1 row in set (0.03 sec)
```

Query 16 :
Query to display the Current Date along with the day name.

Solution 16 :

```
mysql> select curdate() Current_Day, dayname(curdate()) Day;
+-------------+--------+
| Current_Day | Day    |
+-------------+--------+
| 2023-04-21  | Friday |
+-------------+--------+
1 row in set (0.03 sec)
```

Query 17 :
Query to display Name, Hire Date and Salary Review Date which is the 1st Monday after six months of employment.

Solution 17 :

```
mysql> select Ename,Hire_date,date_add(date_add(Hire_date,in
terval 6 month),interval (7-weekday(date_add(Hire_date,inter
val 6 month))) day) Review_Date from employee;
+---------+------------+-------------+
| Ename   | Hire_date  | Review_Date |
+---------+------------+-------------+
| Samarth | 1981-12-17 | 1982-06-21  |
| Aman    | 1981-02-20 | 1981-08-24  |
| Wasim   | 1981-02-22 | 1981-08-24  |
| Jaya    | 1981-04-02 | 1981-10-05  |
| Manvi   | 1981-04-22 | 1981-10-26  |
| Bhaskar | 1981-05-01 | 1981-11-02  |
| Chirag  | 1981-06-09 | 1981-12-14  |
| Kritika | 1981-11-17 | 1982-05-24  |
| Tushar  | 1981-09-08 | 1982-03-15  |
| Aditi   | 1983-01-12 | 1983-07-18  |
| Shikha  | 1982-12-09 | 1983-06-13  |
| Karn    | 1982-09-25 | 1983-03-28  |
| Sheetal | 1981-12-03 | 1982-06-07  |
| Nisha   | 1981-12-03 | 1982-06-07  |
| Madhav  | 1982-01-23 | 1982-07-26  |
+---------+------------+-------------+
15 rows in set (0.01 sec)
```

Query 18 :
Query to display Name and calculate the number of months between today and the date on which employee was hired of department ‘Purchase’.

Solution 18 :

```
mysql> select Ename,12 *  (year(curdate())-year(Hire_date)) +
(month(curdate())-month(Hire_date)) as months from employee wh
ere dno= (Select dno from Department where dname = 'purchase')
;
+--------+--------+
| Ename  | months |
+--------+--------+
| Madhav |    495 |
+--------+--------+
1 row in set (0.00 sec)
```

Query 19 :
Query to display the following for each employee <E-Name> earns < Salary> monthly but wants < 3 * Current Salary >. Label the Column as Dream Salary.

Solution 19 :

```
mysql> select concat(ename,' earns ',salary,' monthly but want
s ',(3*salary)) Dream_Salary from employee;
+-------------------------------------------------+
| Dream_Salary                                    |
+-------------------------------------------------+
| Samarth earns 1000.00 monthly but wants 3000.00 |
| Aman earns 2000.00 monthly but wants 6000.00    |
| Wasim earns 1300.00 monthly but wants 3900.00   |
| Jaya earns 2300.00 monthly but wants 6900.00    |
| Manvi earns 1250.00 monthly but wants 3750.00   |
| Bhaskar earns 2870.00 monthly but wants 8610.00 |
| Chirag earns 2900.00 monthly but wants 8700.00  |
| Kritika earns 2950.00 monthly but wants 8850.00 |
| Tushar earns 1450.00 monthly but wants 4350.00  |
| Aditi earns 1150.00 monthly but wants 3450.00   |
| Shikha earns 2850.00 monthly but wants 8550.00  |
| Karn earns 1200.00 monthly but wants 3600.00    |
| Sheetal earns 950.00 monthly but wants 2850.00  |
| Nisha earns 2600.00 monthly but wants 7800.00   |
| Madhav earns 1300.00 monthly but wants 3900.00  |
+-------------------------------------------------+
15 rows in set (0.00 sec)
```

Query 20 :
Query to display Name with the 1st letter capitalized and all other letter lower case and length of their name of all the employees whose name starts with ‘J’, ’A’ and ‘M’.

Solution 20 :

```
mysql> select concat(upper(substr(ename,1,1)),lower(substr(ena
me,2))) Ename, length(ename) Length from employee where ename
like 'j%' or ename like 'a%' or ename like 'm%';
+--------+--------+
| Ename  | Length |
+--------+--------+
| Aman   |      4 |
| Jaya   |      4 |
| Manvi  |      5 |
| Aditi  |      5 |
| Madhav |      6 |
+--------+--------+
5 rows in set (0.00 sec)
```

Query 21 :
Query to display Name, Hire Date and Day of the week on which the employee started.

Solution 21 :

```
mysql> select ename, hire_date, dayname(hire_date) Day_of_week
 from employee;
+---------+------------+-------------+
| ename   | hire_date  | Day_of_week |
+---------+------------+-------------+
| Samarth | 1981-12-17 | Thursday    |
| Aman    | 1981-02-20 | Friday      |
| Wasim   | 1981-02-22 | Sunday      |
| Jaya    | 1981-04-02 | Thursday    |
| Manvi   | 1981-04-22 | Wednesday   |
| Bhaskar | 1981-05-01 | Friday      |
| Chirag  | 1981-06-09 | Tuesday     |
| Kritika | 1981-11-17 | Tuesday     |
| Tushar  | 1981-09-08 | Tuesday     |
| Aditi   | 1983-01-12 | Wednesday   |
| Shikha  | 1982-12-09 | Thursday    |
| Karn    | 1982-09-25 | Saturday    |
| Sheetal | 1981-12-03 | Thursday    |
| Nisha   | 1981-12-03 | Thursday    |
| Madhav  | 1982-01-23 | Saturday    |
+---------+------------+-------------+
15 rows in set (0.00 sec)
```

Query 22 :
Query to display Name, Department Name and Department No for all the employees.

Solution 22 :

```
mysql> select Emp.Ename Ename, Dept.Dname Dname, Emp.Dno from
Employee Emp, Department Dept where Emp.Dno = Dept.Dno;
+---------+------------+------+
| Ename   | Dname      | Dno  |
+---------+------------+------+
| Chirag  | Accounting |   10 |
| Kritika | Accounting |   10 |
| Samarth | Research   |   20 |
| Jaya    | Research   |   20 |
| Aditi   | Research   |   20 |
| Shikha  | Research   |   20 |
| Nisha   | Research   |   20 |
| Aman    | Sales      |   30 |
| Wasim   | Sales      |   30 |
| Manvi   | Sales      |   30 |
| Bhaskar | Sales      |   30 |
| Tushar  | Sales      |   30 |
| Karn    | Sales      |   30 |
| Sheetal | Sales      |   30 |
| Madhav  | Purchase   |   40 |
+---------+------------+------+
15 rows in set (0.00 sec)
```

Query 23 :
Query to display Unique Listing of all Jobs that are in Department number 30.

Solution 23 :

```
mysql> select distinct job_type from employee where dno = 30;
+-----------+
| job_type  |
+-----------+
| Sales_man |
| Manager   |
| Clerk     |
+-----------+
3 rows in set (0.01 sec)
```

Query 24:
Query to display Name, Dept Name of all employees who have an ‘A’ in their name.

Solution 24 :

```
mysql> select Emp.Ename, Dept.Dname from Employee Emp, Departm
ent Dept where Emp.dno = Dept.dno and Emp.ename like '%a%';
+---------+------------+
| Ename   | Dname      |
+---------+------------+
| Samarth | Research   |
| Aman    | Sales      |
| Wasim   | Sales      |
| Jaya    | Research   |
| Manvi   | Sales      |
| Bhaskar | Sales      |
| Chirag  | Accounting |
| Kritika | Accounting |
| Tushar  | Sales      |
| Aditi   | Research   |
| Shikha  | Research   |
| Karn    | Sales      |
| Sheetal | Sales      |
| Nisha   | Research   |
| Madhav  | Purchase   |
+---------+------------+
15 rows in set (0.00 sec)
```

Query 25 :
Query to display Name, Job, Department No. And Department Name for all the employees working at the Dallas location.

Solution 25 :

```
mysql> select Emp.Ename, Emp.Job_Type, Emp.Dno, Dept.DName fro
m Employee Emp, Department Dept where Emp.Dno = Dept.Dno and D
ept.location = "Dallas";
+---------+----------+------+-------+
| Ename   | Job_Type | Dno  | DName |
+---------+----------+------+-------+
| Aman    | Sales_man |   30 | Sales |
| Wasim   | Sales_man |   30 | Sales |
| Manvi   | Sales_man |   30 | Sales |
| Bhaskar | Manager   |   30 | Sales |
| Tushar  | Sales_man |   30 | Sales |
| Karn    | Clerk     |   30 | Sales |
| Sheetal | Clerk     |   30 | Sales |
+---------+----------+------+-------+
7 rows in set (0.00 sec)
```

Query 26 :
Query to display Name and Employee no. Along with their supervisor's Name and the supervisor's employee no; along with the Employees' Name who do not have a supervisor.

Solution 26 :

```
mysql> select E1.Eno, E1.Ename ,E2.Eno Supervisor_No, E2.Ename
 Supervisor_Name from Employee E1 left outer join Employee E2
on E1.supervisionEno=E2.Eno;
+-----+---------+---------------+-----------------+
| Eno | Ename   | Supervisor_No | Supervisor_Name |
+-----+---------+---------------+-----------------+
| 736 | Samarth | 790           | Sheetal         |
| 749 | Aman    | NULL          | NULL            |
| 752 | Wasim   | 769           | Bhaskar         |
| 756 | Jaya    | 783           | Kritika         |
| 765 | Manvi   | 784           | Tushar          |
| 769 | Bhaskar | 783           | Kritika         |
| 778 | Chirag  | 783           | Kritika         |
| 783 | Kritika | NULL          | NULL            |
| 784 | Tushar  | 769           | Bhaskar         |
| 787 | Aditi   | 778           | Chirag          |
| 788 | Shikha  | 756           | Jaya            |
| 79  | Karn    | 769           | Bhaskar         |
| 790 | Sheetal | 769           | Bhaskar         |
| 792 | Nisha   | 756           | Jaya            |
| 793 | Madhav  | 788           | Shikha          |
+-----+---------+---------------+-----------------+
15 rows in set (0.00 sec)
```

Query 27 :
Query to display Name, Dept No. And Salary of any employee whose department No. and salary matches both the department no. And the salary of any employee who earns a commission.

Solution 27 :

```
mysql> select Ename,Dno,Salary from employee where (Dno,Salary
) in (select Dno,Salary from employee where commission>0);
+-------+------+---------+
| Ename | Dno  | Salary  |
+-------+------+---------+
| Aman  |   30 | 2000.00 |
| Wasim |   30 | 1300.00 |
| Manvi |   30 | 1250.00 |
+-------+------+---------+
3 rows in set (0.00 sec)
```

Query 28 :
Query to display Name and Salaries represented by asterisks, where each asterisk (*) signifies $100.

Solution 28 :

```
mysql> select Ename, repeat('*',(salary/100)) Salary from
 employee;
+---------+--------------------------------+
| Ename   | Salary                         |
+---------+--------------------------------+
| Samarth | **********                     |
| Aman    | ********************           |
| Wasim   | ************                   |
| Jaya    | ************************       |
| Manvi   | ************                   |
| Bhaskar | ******************************   |
| Chirag  | ******************************   |
| Kritika | ******************************** |
| Tushar  | ***************                |
| Aditi   | ************                   |
| Shikha  | ******************************   |
| Karn    | ************                   |
| Sheetal | **********                     |
| Nisha   | *************************      |
| Madhav  | ************                   |
+---------+--------------------------------+
15 rows in set (0.00 sec)
```

Query 29 :
Query to display the Highest, Lowest, Sum and Average Salaries of all the employees.

Solution 29 :

```
mysql> select max(salary) Highest, min(salary) Lowest, av
g(salary) Average, sum(salary) Sum from employee;
+---------+--------+-------------+----------+
| Highest | Lowest | Average     | Sum      |
+---------+--------+-------------+----------+
| 2950.00 | 950.00 | 1871.333333 | 28070.00 |
+---------+--------+-------------+----------+
1 row in set (0.00 sec)
```

Query 30 :
Query to display the number of employees performing the same Job type functions.

Solution 30 :

```
mysql> select Job_type, count(*) Number_of_Employees from
 employee group by job_type;
+-----------+--------------------+
| Job_type  | Number_of_Employees |
+-----------+--------------------+
| Clerk     |                  5 |
| Sales_man |                  4 |
| Manager   |                  3 |
| President |                  1 |
| Analyst   |                  2 |
+-----------+--------------------+
5 rows in set (0.03 sec)
```

Query 31 :
Query to display the total number of supervisors without listing their names.

Solution 31 :

```
mysql> select count(distinct supervisionEno) Total_Supervisors
from employee;
+------------------+
| Total_Supervisors |
+------------------+
|                7 |
+------------------+
1 row in set (0.00 sec)
```

Query 32 :
Query to display the Department Name, Location Name, No. of Employees and the average salary for all employees in that department.

Solution 32 :

```
mysql> select dept.dname, dept.location, count(*) count, avg(e
mp.salary) avg_salary from employee emp, department dept where
 emp.dno = dept.dno group by emp.dno;
+------------+----------+-------+-------------+
| dname      | location | count | avg_salary  |
+------------+----------+-------+-------------+
| Research   | Chennai  |     5 | 1980.000000 |
| Sales      | Dallas   |     7 | 1574.285714 |
| Accounting | Indore   |     2 | 2925.000000 |
| Purchase   | Jaipur   |     1 | 1300.000000 |
+------------+----------+-------+-------------+
4 rows in set (0.03 sec)
```

Query 33 :
Query to display Name and Hire Date for all employees in the same dept. as Blake.

Solution 33 :

```
mysql> select ename, hire_date from employee where dno = (Sele
ct dno from employee where ename="Blake");
+---------+------------+
| ename   | hire_date  |
+---------+------------+
| Aman    | 1981-02-20 |
| Wasim   | 1981-02-22 |
| Manvi   | 1981-04-22 |
| Bhaskar | 1981-05-01 |
| Tushar  | 1981-09-08 |
| Karn    | 1982-09-25 |
| Sheetal | 1981-12-03 |
| Blake   | 1981-08-01 |
+---------+------------+
8 rows in set (0.00 sec)
```

Query 34 :
Query to display the Employee No. And Name for all employees who earn more than the average salary.

Solution 34 :

```
mysql> select Eno, Ename from employee where salary >
(select avg(salary) from employee);
+-----+---------+
| Eno | Ename   |
+-----+---------+
| 749 | Aman    |
| 756 | Jaya    |
| 769 | Bhaskar |
| 778 | Chirag  |
| 783 | Kritika |
| 788 | Shikha  |
| 792 | Nisha   |
+-----+---------+
7 rows in set (0.00 sec)
```

Query 35 :
Query to display Employee Number and Name for all employees who work in a department with any employee whose name contains a ‘T’.

Solution 35 :

```
mysql> select Eno, Ename from employee where dno in
(select dno from employee where ename like "%t%");
+-----+---------+
| Eno | Ename   |
+-----+---------+
| 736 | Samarth |
| 756 | Jaya    |
| 787 | Aditi   |
| 788 | Shikha  |
| 792 | Nisha   |
| 778 | Chirag  |
| 783 | Kritika |
| 749 | Aman    |
| 752 | Wasim   |
| 765 | Manvi   |
| 769 | Bhaskar |
| 784 | Tushar  |
| 79  | Karn    |
| 790 | Sheetal |
| 799 | Blake   |
+-----+---------+
15 rows in set (0.00 sec)
```

Query 36 :
Query to display the names and salaries of all employees who report to supervisor named ‘King’.

Solution 36 :

```
mysql> select Ename, salary from employee where supe
rvisionEno = (select Eno from employee where Ename =
 'King');
+--------+---------+
| Ename  | salary  |
+--------+---------+
| Shikha | 2850.00 |
| Nisha  | 2600.00 |
+--------+---------+
2 rows in set (0.00 sec)
```

Query 37 :
Query to display the department no, name and job for all employees in the Sales department.

Solution 37 :

```
mysql> select Dno, Ename, job_type from employee where d
no = (select dno from department where dname = 'Sales');

+------+---------+-----------+
| Dno  | Ename   | job_type  |
+------+---------+-----------+
|   30 | Aman    | Sales_man |
|   30 | Wasim   | Sales_man |
|   30 | Manvi   | Sales_man |
|   30 | Bhaskar | Manager   |
|   30 | Tushar  | Sales_man |
|   30 | Karn    | Clerk     |
|   30 | Sheetal | Clerk     |
|   30 | Blake   | Clerk     |
+------+---------+-----------+
8 rows in set (0.00 sec)
```

Query 38 :
Display names of employees along with their department name who have more than 20 years experience.

Solution 38 :

```
mysql> select Emp.Ename, Dept.Dname from Employee Emp,
Department Dept where Emp.dno = Dept.dno and (datediff(
current_date(),Emp.hire_date)/365) > 20;
+---------+------------+
| Ename   | Dname      |
+---------+------------+
| Chirag  | Accounting |
| Kritika | Accounting |
| Samarth | Research   |
| King    | Research   |
| Aditi   | Research   |
| Shikha  | Research   |
| Nisha   | Research   |
| Aman    | Sales      |
| Wasim   | Sales      |
| Manvi   | Sales      |
| Bhaskar | Sales      |
| Tushar  | Sales      |
| Karn    | Sales      |
| Sheetal | Sales      |
+---------+------------+
14 rows in set (0.00 sec)
```

Query 39 :
Display total number of departments at each location.

Solution 39 :

```
mysql> select Location, count(*) No_of_Dept from depart
ment group by location;
+-----------+------------+
| Location  | No_of_Dept |
+-----------+------------+
| Indore    |          1 |
| Chennai   |          1 |
| Dallas    |          1 |
| Jaipur    |          1 |
| New Delhi |          1 |
+-----------+------------+
5 rows in set (0.00 sec)
```

Query 40 :
Find the department name in which at least 20 employees work in.

Solution 40 :

```
mysql> /*Owing to limited data, modifing limit to 2*/
mysql> select Dept.Dname from Employee Emp, Department Dept where
Emp.Dno = Dept.Dno group by Emp.dno having count(*) > 2;
+-----------+
| Dname     |
+-----------+
| Research  |
| Sales     |
| Marketing |
+-----------+
3 rows in set (0.00 sec)
```

Query 41 :
Query to find the employee' name who is not supervisor and name of supervisor supervising more than 5 employees.

Solution 41 :

```
mysql> select ename from employee where eno not in (select dis
tinct supervisionEno from employee where supervisionEno is not
 NULL) union select ename from employee where eno in (select s
upervisionEno from employee group by supervisionEno having cou
nt(*) > 2);
+---------+
| ename   |
+---------+
| Samarth |
| Aman    |
| Wasim   |
| Manvi   |
| Aditi   |
| Karn    |
| Nisha   |
| Madhav  |
| Blake   |
| Bhaskar |
| Kritika |
+---------+
11 rows in set (0.00 sec)
```

Query 42 :
Query to display the job type with maximum and minimum employees

Solution 42 :

```
mysql> (select job_type from employee group by job_type order
by count(*) limit 1) union (select job_type from employee grou
p by job_type order by count(*) desc limit 1);
+-----------+
| job_type  |
+-----------+
| President |
| Clerk     |
+-----------+
2 rows in set (0.00 sec)
```

Name - ADARSH PANDEY **Roll No -** 2102002

END OF ASSIGNMENT