

ASSIGNMENT -3

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SELECT statement

1. Query employee number, name and salary of every employee.

```
mysql> select empno,ename,sal from emp;
```

```
+-----+-----+-----+
| empno | ename  | sal   |
+-----+-----+-----+
| 7369 | SMITH  | 800.00 |
| 7499 | ALLEN  | 1600.00 |
| 7521 | WARD   | 1250.00 |
| 7566 | JONES  | 2975.00 |
| 7654 | MARTIN | 1250.00 |
| 7698 | BLAKE  | 2850.00 |
| 7782 | CLARK  | 2450.00 |
| 7788 | SCOTT  | 3000.00 |
| 7839 | KING   | 5000.00 |
| 7844 | TURNER | 1500.00 |
| 7876 | ADAMS  | 1100.00 |
| 7900 | JAMES  | 950.00 |
| 7902 | FORD   | 3000.00 |
| 7934 | MILLER | 1300.00 |
+-----+-----+-----+
14 rows in set (0.06 sec)
```

```
mysql>
```

2. Display Employee Number, Name of the Employee, Salary and DA for every employee. DA is calculated as sal * 20 %.

```
mysql> select empno as Employee_Id,ename as Employee_Name,sal as Salary,sal*0.20 as DA from emp;
```

```
+-----+-----+-----+-----+
| Employee_Id | Employee_Name | Salary | DA   |
+-----+-----+-----+-----+
| 7369 | SMITH      | 800.00 | 160.00 |
| 7499 | ALLEN      | 1600.00 | 320.00 |
| 7521 | WARD       | 1250.00 | 250.00 |
| 7566 | JONES      | 2975.00 | 595.00 |
| 7654 | MARTIN     | 1250.00 | 250.00 |
| 7698 | BLAKE      | 2850.00 | 570.00 |
| 7782 | CLARK      | 2450.00 | 490.00 |
| 7788 | SCOTT      | 3000.00 | 600.00 |
| 7839 | KING       | 5000.00 | 1000.00 |
| 7844 | TURNER     | 1500.00 | 300.00 |
| 7876 | ADAMS      | 1100.00 | 220.00 |
| 7900 | JAMES      | 950.00 | 190.00 |
| 7902 | FORD       | 3000.00 | 600.00 |
| 7934 | MILLER     | 1300.00 | 260.00 |
```

```
+-----+-----+-----+-----+
14 rows in set (0.00 sec)
```

mysql>

3. Display empno, ename , hiredate, comm. of all employee and heading for the columns would be emp#, Employee Name, Date of Join, COMMISSION.

mysql> select empno,ename as Employee_Name,hiredate as Date_Of_Joining,comm as Commission from emp;

```
+-----+-----+-----+-----+
| empno | Employee_Name | Date_Of_Joining | Commission |
+-----+-----+-----+-----+
| 7369 | SMITH      | 1980-12-17      | NULL      |
| 7499 | ALLEN      | 1981-02-20      | 300.00    |
| 7521 | WARD       | 1981-02-22      | 500.00    |
| 7566 | JONES      | 1981-04-02      | NULL      |
| 7654 | MARTIN     | 1981-09-28      | 1400.00   |
| 7698 | BLAKE      | 1981-05-01      | NULL      |
| 7782 | CLARK      | 1981-06-09      | NULL      |
| 7788 | SCOTT      | 1982-12-09      | NULL      |
| 7839 | KING       | 1981-11-17      | NULL      |
| 7844 | TURNER     | 1981-09-08      | 0.00      |
| 7876 | ADAMS      | 1983-01-12      | NULL      |
| 7900 | JAMES      | 1981-12-03      | NULL      |
| 7902 | FORD       | 1981-12-03      | NULL      |
| 7934 | MILLER     | 1982-01-23      | NULL      |
+-----+-----+-----+-----+
```

14 rows in set (0.00 sec)

4. Create a query to display unique department no from EMP table.

mysql> select distinct deptno from emp;

```
+-----+
| deptno |
+-----+
| 20     |
| 30     |
| 10     |
+-----+
```

3 rows in set (0.00 sec)

5. Display name concatenated with the Salary, separated by comma and space and name the column as 'Employee Salary'.

mysql> select concat_ws(" , ",ename,sal) as Employee_Salary from emp;

```
+-----+
| Employee_Salary |
+-----+
| SMITH , 800.00  |
| ALLEN , 1600.00 |
| WARD , 1250.00  |
| JONES , 2975.00 |
| MARTIN , 1250.00 |
| BLAKE , 2850.00 |
| CLARK , 2450.00 |
+-----+
```

```
| SCOTT , 3000.00 |
| KING , 5000.00 |
| TURNER , 1500.00 |
| ADAMS , 1100.00 |
| JAMES , 950.00 |
| FORD , 3000.00 |
| MILLER , 1300.00 |
+-----+
14 rows in set (0.00 sec)
```

6. Display the output as follows for all the rows.

"BLAKE WORKS AS MANAGER IN DEPARTMENT 30 "

BLAKE is name of the employee

MANAGER is job of the person

30 is department number where the person works

```
mysql> select ename as Employee_Name,job as Job_Role,deptno as Department_No from emp where
ename="BLAKE";
```

```
+-----+-----+-----+
| Employee_Name | Job_Role | Department_No |
+-----+-----+-----+
| BLAKE        | MANAGER  | 30           |
+-----+-----+-----+
1 row in set (0.00 sec)
```

7. Create a query which will display all employee data those who is earning more than 2000.

```
mysql> select *from emp where sal>2000;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR | HIREDATE   | SAL    | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7566 | JONES | MANAGER  | 7839 | 1981-04-02 | 2975.00 | NULL | 20 |
| 7698 | BLAKE | MANAGER  | 7839 | 1981-05-01 | 2850.00 | NULL | 30 |
| 7782 | CLARK | MANAGER  | 7839 | 1981-06-09 | 2450.00 | NULL | 10 |
| 7788 | SCOTT | ANALYST  | 7566 | 1982-12-09 | 3000.00 | NULL | 20 |
| 7839 | KING  | PRESIDENT | NULL | 1981-11-17 | 5000.00 | NULL | 10 |
| 7902 | FORD  | ANALYST  | 7566 | 1981-12-03 | 3000.00 | NULL | 20 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

8. Create a query which display name, salary, date of join and job of all employees who works as CLERK.

```
mysql> select ename as Name,sal as Salary,hiredate as Date_Of_Join,job from emp where job="clerk";
```

```
+-----+-----+-----+-----+
| Name  | Salary | Date_Of_Join | job  |
+-----+-----+-----+-----+
| SMITH | 800.00 | 1980-12-17   | CLERK |
| ADAMS | 1100.00 | 1983-01-12   | CLERK |
| JAMES | 950.00 | 1981-12-03   | CLERK |
```

```
| MILLER | 1300.00 | 1982-01-23 | CLERK |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

9. Display employee detail of people getting salary between 2000 and 4000.

```
mysql> select *from emp where sal between 2000 and 4000;
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB   | MGR | HIREDATE | SAL   | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7566 | JONES | MANAGER | 7839 | 1981-04-02 | 2975.00 | NULL | 20 |
| 7698 | BLAKE | MANAGER | 7839 | 1981-05-01 | 2850.00 | NULL | 30 |
| 7782 | CLARK | MANAGER | 7839 | 1981-06-09 | 2450.00 | NULL | 10 |
| 7788 | SCOTT | ANALYST | 7566 | 1982-12-09 | 3000.00 | NULL | 20 |
| 7902 | FORD  | ANALYST | 7566 | 1981-12-03 | 3000.00 | NULL | 20 |
+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql>
```

10. Write a query which will display ename, job and hiredate of all employee who have been hired between April 1, 1981 and March 31, 1982. Order the query in ascending order of hiredate.

```
mysql> select ename,job,hiredate from emp where hiredate between "1981-04-01" and "1982-03-31"
order by hiredate;
+-----+-----+-----+
| ename | job   | hiredate |
+-----+-----+-----+
| JONES | MANAGER | 1981-04-02 |
| BLAKE | MANAGER | 1981-05-01 |
| CLARK | MANAGER | 1981-06-09 |
| TURNER | SALESMAN | 1981-09-08 |
| MARTIN | SALESMAN | 1981-09-28 |
| KING  | PRESIDENT | 1981-11-17 |
| JAMES | CLERK   | 1981-12-03 |
| FORD  | ANALYST | 1981-12-03 |
| MILLER | CLERK   | 1982-01-23 |
+-----+-----+-----+
9 rows in set (0.00 sec)
```

```
mysql>
```

11. Write a query which will display employee name, department number of all employees' works in departments 10 and 30 in alphabetical order by name.

```
mysql> select ename,deptno from emp where deptno in (10 , 30) order by ename;
+-----+-----+
| ename | deptno |
+-----+-----+
| ALLEN | 30 |
| BLAKE | 30 |
| CLARK | 10 |
| JAMES | 30 |
| KING  | 10 |
| MARTIN | 30 |
```

```
| MILLER | 10 |
| TURNER | 30 |
| WARD | 30 |
+-----+-----+
9 rows in set (0.00 sec)
```

mysql>

12. Select name and job of all employee those who have joined in 1982.

```
mysql> select ename,job from emp where year(hiredate)="1982";
+-----+-----+
| ename | job |
+-----+-----+
| SCOTT | ANALYST |
| MILLER | CLERK |
+-----+-----+
2 rows in set (0.00 sec)
```

mysql>

13. Display name and job of all employees who do not have a manager.

```
mysql> select ename,job from emp where job!="manager";
+-----+-----+
| ename | job |
+-----+-----+
| SMITH | CLERK |
| ALLEN | SALESMAN |
| WARD | SALESMAN |
| MARTIN | SALESMAN |
| SCOTT | ANALYST |
| KING | PRESIDENT |
| TURNER | SALESMAN |
| ADAMS | CLERK |
| JAMES | CLERK |
| FORD | ANALYST |
| MILLER | CLERK |
+-----+-----+
11 rows in set (0.00 sec)
```

mysql>

14. Display all employee name, salary and commission of all employees who earn commission. Display the data in descending order of salary and commission.

```
mysql> select ename,sal,comm from emp where comm!="null" order by sal || comm desc;
+-----+-----+-----+
| ename | sal | comm |
+-----+-----+-----+
| ALLEN | 1600.00 | 300.00 |
| WARD | 1250.00 | 500.00 |
| MARTIN | 1250.00 | 1400.00 |
+-----+-----+-----+
3 rows in set, 2 warnings (0.00 sec)
```

mysql>

15. Display all employee name whose name starts with 'S'.

mysql> select ename from emp where ename like "s%";

```
+-----+
| ename |
+-----+
| SMITH |
| SCOTT |
+-----+
```

2 rows in set (0.00 sec)

mysql>

16. Display name, job and salary of all employees whose job is Manager or Analyst and their salary is not equal to 1000, 3000 or 5000.

mysql> select ename,job,sal from emp where job="manager"|| job="analyst" and sal not in(1000,3000,5000);

```
+-----+-----+-----+
| ename | job   | sal   |
+-----+-----+-----+
| JONES | MANAGER | 2975.00 |
| BLAKE | MANAGER | 2850.00 |
| CLARK | MANAGER | 2450.00 |
+-----+-----+-----+
```

3 rows in set, 1 warning (0.00 sec)

mysql>

17. Display name and salary of all employees who earns commission more than 75% of their salary.

mysql> select ename,sal from emp where comm > (sal*0.75);

```
+-----+-----+
| ename | sal   |
+-----+-----+
| MARTIN | 1250.00 |
+-----+-----+
```

1 row in set (0.00 sec)

mysql>

18. Display Employee number, Salary, Salary increase by 15%. Label the column as NEW SALARY.

mysql> select empno,sal,(sal+(sal*0.15)) as New_Salary from emp;

```
+-----+-----+-----+
| empno | sal   | New_Salary |
+-----+-----+-----+
| 7369 | 800.00 | 920.00 |
| 7499 | 1600.00 | 1840.00 |
| 7521 | 1250.00 | 1437.50 |
| 7566 | 2975.00 | 3421.25 |
| 7654 | 1250.00 | 1437.50 |
| 7698 | 2850.00 | 3277.50 |
```

```
| 7782 | 2450.00 | 2817.50 |
| 7788 | 3000.00 | 3450.00 |
| 7839 | 5000.00 | 5750.00 |
| 7844 | 1500.00 | 1725.00 |
| 7876 | 1100.00 | 1265.00 |
| 7900 | 950.00 | 1092.50 |
| 7902 | 3000.00 | 3450.00 |
| 7934 | 1300.00 | 1495.00 |
+-----+-----+-----+
14 rows in set (0.00 sec)
```

mysql>

- 19. Write a query which will display name in upper case, job first letter capitalized and all other letters lower case and length of the name for all employees whose name starts with 'S' or 'J'.**

```
mysql> select upper(ename) as Name,concat(upper(substring(job,1,1)),lower(substring(job,2))) as
Job,length(ename) as Length from emp where ename like "j%"|| ename like "S%";
+-----+-----+-----+
| Name | Job   | Length |
+-----+-----+-----+
| SMITH | Clerk | 5 |
| JONES | Manager | 5 |
| SCOTT | Analyst | 5 |
| JAMES | Clerk | 5 |
+-----+-----+-----+
4 rows in set, 1 warning (0.00 sec)
```

mysql>

- 20. Create a Query which will display the employee name and commission amount. If employee does not earn commission, put "No Commission". Label the column as COMM**

```
mysql> select ename,ifnull(comm,"No commission") as Comm from emp;
+-----+-----+
| ename | Comm           |
+-----+-----+
| SMITH | No commission |
| ALLEN | 300.00         |
| WARD  | 500.00         |
| JONES | No commission |
| MARTIN | 1400.00        |
| BLAKE | No commission |
| CLARK | No commission |
| SCOTT | No commission |
| KING  | No commission |
| TURNER | 0.00          |
| ADAMS | No commission |
| JAMES | No commission |
| FORD  | No commission |
| MILLER | No commission |
+-----+-----+
14 rows in set (0.00 sec)
```

mysql>

21. Create a query that displays the difference of salary and commission. All values should be displayed as positive integer.

```
mysql> select abs((sal-ifnull(comm,0))) as Sal_Comm_Diff from emp;
```

```
+-----+
| Sal_Comm_Diff |
+-----+
|      800.00 |
|     1300.00 |
|      750.00 |
|     2975.00 |
|      150.00 |
|     2850.00 |
|     2450.00 |
|     3000.00 |
|     5000.00 |
|     1500.00 |
|     1100.00 |
|      950.00 |
|     3000.00 |
|     1300.00 |
+-----+
14 rows in set (0.00 sec)
```

```
mysql>
```

22. Display the name, salary and the salary in X. Each X represents a 100 in Salary.

Sample Output.

```
CLARK      2450 xxxxxxxxxxxxxxxxxxxxxxxxx
ALLEN      1600 xxxxxxxxxxxxxxxxx
TURNER     1500 xxxxxxxxxxxxxxxxx
```

```
mysql> SELECT ename,sal,REPEAT('X', FLOOR(sal/100)) 'SALARY(X)'FROM emp order by sal desc;
```

```
+-----+-----+-----+
| ename | sal   | SALARY(X) |
+-----+-----+-----+
| KING  | 5000.00 | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| SCOTT | 3000.00 | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| FORD  | 3000.00 | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| JONES | 2975.00 | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| BLAKE | 2850.00 | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| CLARK | 2450.00 | XXXXXXXXXXXXXXXXXXXXXXXX |
| ALLEN | 1600.00 | XXXXXXXXXXXXXXXX |
| TURNER | 1500.00 | XXXXXXXXXXXXXXXX |
| MILLER | 1300.00 | XXXXXXXXXXXXXXXX |
| WARD  | 1250.00 | XXXXXXXXXXXXXXXX |
| MARTIN | 1250.00 | XXXXXXXXXXXXXXXX |
| ADAMS | 1100.00 | XXXXXXXXXXXXXXXX |
| JAMES | 950.00 | XXXXXXXX |
| SMITH | 800.00 | XXXXXXXX |
+-----+-----+-----+
14 rows in set (0.00 sec)
```


mysql>

23. Write a query to display ename, sal , PT (Professional Tax) of each employee. PT is calculated as 2.5 % of Salary and always in rounded rupees.

mysql> select ename,sal,(sal*0.025) as PT from emp;

```
+-----+-----+-----+
| ename | sal   | PT    |
+-----+-----+-----+
| SMITH | 800.00 | 20.000 |
| ALLEN | 1600.00 | 40.000 |
| WARD  | 1250.00 | 31.250 |
| JONES | 2975.00 | 74.375 |
| MARTIN | 1250.00 | 31.250 |
| BLAKE | 2850.00 | 71.250 |
| CLARK | 2450.00 | 61.250 |
| SCOTT | 3000.00 | 75.000 |
| KING  | 5000.00 | 125.000 |
| TURNER | 1500.00 | 37.500 |
| ADAMS | 1100.00 | 27.500 |
| JAMES | 950.00 | 23.750 |
| FORD  | 3000.00 | 75.000 |
| MILLER | 1300.00 | 32.500 |
+-----+-----+-----+
14 rows in set (0.00 sec)
```

mysql>

Single Row Functions

24. Display employee name and hiredate where hiredate must be displayed in the format similar to "12th Jan 1981".

mysql> select ename as Name, date_format(hiredate, '%D %M %Y') as hiredate from emp;

```
+-----+-----+
| Name | hiredate          |
+-----+-----+
| ALLEN | 20th February 1981 |
| WARD  | 22nd February 1981 |
| JONES | 2nd April 1981     |
| MARTIN | 28th September 1981 |
| BLAKE | 1st May 1981       |
| CLARK | 9th June 1981      |
| SCOTT | 9th December 1982  |
| TURNER | 8th September 1981 |
| ADAMS | 12th January 1983  |
| JAMES | 3rd December 1981  |
| FORD  | 3rd December 1981  |
| SMITH | 17th December 1980 |
| MILLER | 23rd January 1982  |
| KING  | 23rd November 1981 |
+-----+-----+
14 rows in set (0.10 sec)
```

25. Display name, hiredate and review date of all employee. Review date is first Monday after six months of Service. Label the Column REVIEW. Format the dates to appear in the format similar to "Sunday, the Seventh of Septemer, 1981".

```
mysql> select ename,date_format(hiredate,'%W, the %D of %M, %Y')as
hiredate,date_format(Date_add(hiredate,interval 6 month),'%W, the %D of %M, %Y')as review from emp;
+-----+-----+-----+
| ename | hiredate | review |
+-----+-----+-----+
| ALLEN | Friday, the 20th of February, 1981 | Thursday, the 20th of August, 1981 |
| WARD | Sunday, the 22nd of February, 1981 | Saturday, the 22nd of August, 1981 |
| JONES | Thursday, the 2nd of April, 1981 | Friday, the 2nd of October, 1981 |
| MARTIN | Monday, the 28th of September, 1981 | Sunday, the 28th of March, 1982 |
| BLAKE | Friday, the 1st of May, 1981 | Sunday, the 1st of November, 1981 |
| CLARK | Tuesday, the 9th of June, 1981 | Wednesday, the 9th of December, 1981 |
| SCOTT | Thursday, the 9th of December, 1982 | Thursday, the 9th of June, 1983 |
| TURNER | Tuesday, the 8th of September, 1981 | Monday, the 8th of March, 1982 |
| ADAMS | Wednesday, the 12th of January, 1983 | Tuesday, the 12th of July, 1983 |
| JAMES | Thursday, the 3rd of December, 1981 | Thursday, the 3rd of June, 1982 |
| FORD | Thursday, the 3rd of December, 1981 | Thursday, the 3rd of June, 1982 |
| SMITH | Wednesday, the 17th of December, 1980 | Wednesday, the 17th of June, 1981 |
| MILLER | Saturday, the 23rd of January, 1982 | Friday, the 23rd of July, 1982 |
| KING | Monday, the 23rd of November, 1981 | Sunday, the 23rd of May, 1982 |
+-----+-----+-----+
14 rows in set (0.02 sec)
```

26. Display each employee name and no of months he worked for the organization. Label the column as 'MONTHS WORKED'. Order your result by number of months employed. Round the number of months to closest whole number.

```
mysql> select ename as 'employee name', round(timestampdiff(month, hiredate, now())) as 'MONTHS
WORKED' from emp;
+-----+-----+
| employee name | MONTHS WORKED |
+-----+-----+
| ALLEN | 484 |
| WARD | 484 |
| JONES | 483 |
| MARTIN | 477 |
| BLAKE | 482 |
| CLARK | 481 |
| SCOTT | 463 |
| TURNER | 478 |
| ADAMS | 461 |
| JAMES | 475 |
| FORD | 475 |
| SMITH | 486 |
| MILLER | 473 |
| KING | 475 |
+-----+-----+
14 rows in set (0.07 sec)
```

27. Create a query which will display ename, salary of each employee. Format the salary to be 15 character long and left padded with '\$'.

```
mysql> select ename as Employee_Name, lpad(round(sal), 15, "$") as Salary from emp;
```

```
+-----+-----+
| Employee_Name | Salary      |
+-----+-----+
| ALLEN        | $$$$$$$$$$1600 |
| WARD         | $$$$$$$$$$1250 |
| JONES        | $$$$$$$$$$2975 |
| MARTIN       | $$$$$$$$$$1250 |
| BLAKE        | $$$$$$$$$$2850 |
| CLARK        | $$$$$$$$$$2450 |
| SCOTT        | $$$$$$$$$$3000 |
| TURNER       | $$$$$$$$$$1500 |
| ADAMS        | $$$$$$$$$$1100 |
| JAMES        | $$$$$$$$$$950  |
| FORD         | $$$$$$$$$$3000 |
| SMITH        | $$$$$$$$$$800  |
| MILLER       | $$$$$$$$$$1300 |
| KING        | $$$$$$$$$$5000 |
+-----+-----+
14 rows in set (0.00 sec)
```

28. Write a query that displays ename, sal, job and grade of all employee. Grade depends on the following table.

JOB	Grade
PRESIDENT	A
MANAGER	B
ANALYST	C
OTHERS	D

```
mysql> select ename, sal, job,(
-> case job
-> when 'PRESIDENT'
-> then 'A'
-> when 'MANAGER'
-> then 'B'
-> when 'ANALYST'
-> then 'C'
-> else
-> 'OTHERS'
-> end ) as 'Grade'from emp;
+-----+-----+-----+-----+
| ename | sal   | job      | Grade |
+-----+-----+-----+-----+
| ALLEN | 1600.00 | SALESMAN | OTHERS |
| WARD  | 1250.00 | SALESMAN | OTHERS |
| JONES | 2975.00 | MANAGER  | B      |
| MARTIN | 1250.00 | SALESMAN | OTHERS |
| BLAKE | 2850.00 | MANAGER  | B      |
| CLARK | 2450.00 | MANAGER  | B      |
| SCOTT | 3000.00 | ANALYST  | C      |
| TURNER | 1500.00 | SALESMAN | OTHERS |
| ADAMS | 1100.00 | CLERK    | OTHERS |
| JAMES | 950.00  | CLERK    | OTHERS |
| FORD  | 3000.00 | ANALYST  | C      |
| SMITH | 800.00  | CLERK    | OTHERS |
| MILLER | 1300.00 | CLERK    | OTHERS |
| KING  | 5000.00 | PRESIDENT | A      |
+-----+-----+-----+-----+
14 rows in set (0.00 sec)
```

Joins

29. Write a query which will display name, department number and department name of all employee.

```
mysql> select emp.ename,dept.deptno,dept.dname from emp left join dept on dept.deptno=emp.deptno;
+-----+-----+-----+
| ename | deptno | dname      |
+-----+-----+-----+
| SMITH | 20     | RESEARCH   |
| ALLEN | 30     | SALES      |
| WARD  | 30     | SALES      |
| JONES | 20     | RESEARCH   |
| MARTIN | 30     | SALES      |
| BLAKE | 30     | SALES      |
| CLARK | 10     | ACCOUNTING |
| SCOTT | 20     | RESEARCH   |
| KING  | 10     | ACCOUNTING |
| TURNER | 30     | SALES      |
| ADAMS | 20     | RESEARCH   |
| JAMES | 30     | SALES      |
| FORD  | 20     | RESEARCH   |
```

```
| MILLER | 10 | ACCOUNTING |
+-----+-----+-----+
14 rows in set (0.00 sec)
```

mysql>

30. List employees located in dallas.

```
mysql> select * from emp left join dept on dept.deptno=emp.deptno where loc="Dallas";
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB   | MGR | HIREDATE | SAL   | COMM | DEPTNO | DEPTNO | DNAME |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369 | SMITH | CLERK | 7902 | 1980-12-17 | 800.00 | NULL | 20 | 20 | RESEARCH |
DALLAS |
| 7566 | JONES | MANAGER | 7839 | 1981-04-02 | 2975.00 | NULL | 20 | 20 | RESEARCH |
DALLAS |
| 7788 | SCOTT | ANALYST | 7566 | 1982-12-09 | 3000.00 | NULL | 20 | 20 | RESEARCH |
DALLAS |
| 7876 | ADAMS | CLERK | 7788 | 1983-01-12 | 1100.00 | NULL | 20 | 20 | RESEARCH |
DALLAS |
| 7902 | FORD | ANALYST | 7566 | 1981-12-03 | 3000.00 | NULL | 20 | 20 | RESEARCH |
DALLAS |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.06 sec)
```

mysql>

31. List employee and department details for department 30 and 40

```
mysql> select * from emp right join dept on emp.deptno=dept.deptno where dept.deptno in (30,40);
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB   | MGR | HIREDATE | SAL   | COMM | DEPTNO | DEPTNO | DNAME |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 7900 | JAMES | CLERK | 7698 | 1981-12-03 | 950.00 | NULL | 30 | 30 | SALES |
CHICAGO |
| 7844 | TURNER | SALESMAN | 7698 | 1981-09-08 | 1500.00 | 0.00 | 30 | 30 | SALES |
CHICAGO |
| 7698 | BLAKE | MANAGER | 7839 | 1981-05-01 | 2850.00 | NULL | 30 | 30 | SALES |
CHICAGO |
| 7654 | MARTIN | SALESMAN | 7698 | 1981-09-28 | 1250.00 | 1400.00 | 30 | 30 | SALES |
CHICAGO |
| 7521 | WARD | SALESMAN | 7698 | 1981-02-22 | 1250.00 | 500.00 | 30 | 30 | SALES |
CHICAGO |
| 7499 | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600.00 | 300.00 | 30 | 30 | SALES |
CHICAGO |
| NULL | NULL | NULL | NULL | NULL | NULL | NULL | 40 | 40 | OPERATIONS |
BOSTON |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

mysql>

32. Display employee name, department name and location of all employee who earns commission.

```
select ename,dname,loc from emp left join dept on dept.deptno=emp.deptno where comm is not null;
```

```
+-----+-----+-----+
# ename      dname loc
ALLEN  SALES  CHICAGO
WARD   SALES  CHICAGO
MARTIN  SALES  CHICAGO
TURNER  SALES  CHICAGO
```

33. Display the employee name and department name for all employees who have A in their name.

```
mysql> select ename,dname from emp left join dept on dept.deptno=emp.deptno where emp.ename like "A%";
```

```
+-----+-----+
| ename | dname |
+-----+-----+
| ALLEN | SALES |
| ADAMS | RESEARCH |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql>
```

34. Display employee number, name, and his manager's no and name. Label the columns Emp#, Employee, Mgr#, Manager and Display all employees including King, Who has no manager.

```
mysql> select empno as EmpNo,ename as Employee_Name,ifnull(mgr,"No manager") as ManagerId from emp left join dept on dept.deptno=emp.deptno;
```

```
+-----+-----+-----+
| EmpNo | Employee_Name | ManagerId |
+-----+-----+-----+
| 7369 | SMITH          | 7902      |
| 7499 | ALLEN          | 7698      |
| 7521 | WARD           | 7698      |
| 7566 | JONES          | 7839      |
| 7654 | MARTIN         | 7698      |
| 7698 | BLAKE          | 7839      |
| 7782 | CLARK          | 7839      |
| 7788 | SCOTT          | 7566      |
| 7839 | KING           | No manager |
| 7844 | TURNER         | 7698      |
| 7876 | ADAMS          | 7788      |
| 7900 | JAMES          | 7698      |
| 7902 | FORD           | 7566      |
| 7934 | MILLER         | 7782      |
+-----+-----+-----+
14 rows in set (0.00 sec)
```

```
mysql>
```

35. Display employee name, hire date along with their manager's name and hire date for all employees who hired before their managers.

```
mysql> Select e.ename as 'employee',e.hiredate as 'emp hiredate' ,m.hiredate as 'mgr hiredate',m.ename as 'manager' from emp e join emp m on e.mgr=m.empno where e.hiredate<m.hiredate;
```

```

+-----+-----+-----+-----+
| employee | emp hiredate | mgr hiredate | manager |
+-----+-----+-----+-----+
| WARD    | 1981-02-22  | 1981-05-01  | BLAKE   |
| ALLEN   | 1981-02-20  | 1981-05-01  | BLAKE   |
| CLARK   | 1981-06-09  | 1981-11-17  | KING    |
| BLAKE   | 1981-05-01  | 1981-11-17  | KING    |
| JONES   | 1981-04-02  | 1981-11-17  | KING    |
| SMITH   | 1980-12-17  | 1981-12-03  | FORD    |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

36. Write a query which will display deptno, department name and emp name of all employee. Also display the department name where there is no employee. Display "NO EMPLOYEE" where there is no employee in the department.

```

mysql> select empno,ifnull(ename, "No employee") as Employee,emp.deptno,dname from emp right join
dept on dept.deptno=emp.deptno;
+-----+-----+-----+-----+
| empno | Employee   | deptno | dname   |
+-----+-----+-----+-----+
| 7934 | MILLER    | 10 | ACCOUNTING |
| 7839 | KING      | 10 | ACCOUNTING |
| 7782 | CLARK     | 10 | ACCOUNTING |
| 7902 | FORD      | 20 | RESEARCH   |
| 7876 | ADAMS     | 20 | RESEARCH   |
| 7788 | SCOTT     | 20 | RESEARCH   |
| 7566 | JONES     | 20 | RESEARCH   |
| 7369 | SMITH     | 20 | RESEARCH   |
| 7900 | JAMES     | 30 | SALES      |
| 7844 | TURNER    | 30 | SALES      |
| 7698 | BLAKE     | 30 | SALES      |
| 7654 | MARTIN    | 30 | SALES      |
| 7521 | WARD      | 30 | SALES      |
| 7499 | ALLEN     | 30 | SALES      |
| NULL | No employee | NULL | OPERATIONS |
+-----+-----+-----+-----+
15 rows in set (0.00 sec)

```

mysql>

Group Functions

37. Display the Highest, Lowest, Total & Average salary of all employees. Label the columns Maximum, Minimum, Total and Average respectively. Round the result to nearest whole number.

```

mysql> select max(sal) as Highest_Salary, min(sal) as Lowest_Salary,floor(avg(sal)) as
Averagre_Salary,floor((sal+ifnull(comm,0))) as Total_Salary from emp;
+-----+-----+-----+-----+
| Highest_Salary | Lowest_Salary | Averagre_Salary | Total_Salary |
+-----+-----+-----+-----+
| 5000.00 | 800.00 | 2073 | 1900 |

```

```
+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

38. Write a query to display number of people in each Department. Also display department name.

```
mysql> select emp.deptno,count(*) as No_of_Employee,dept.dname from emp left join dept on
dept.deptno=emp.deptno group by deptno; -- (with joins)
```

```
select emp.deptno,count(*) as No_of_Employee,dept.dname from emp,dept where
emp.deptno=dept.deptno group by emp.deptno; -- (without joins)
```

```
+-----+-----+-----+
| deptno | No_of_Employee | dname      |
+-----+-----+-----+
| 30 | 6 | SALES |
| 20 | 5 | RESEARCH |
| 10 | 3 | ACCOUNTING |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

39. Determine the number of managers without listing them. Label the column as 'Number of Managers'.

```
mysql> select count(mgr) as No_of_Managers from emp where mgr is not null group by mgr;
```

```
+-----+
| No_of_Managers |
+-----+
| 5 |
| 3 |
| 2 |
| 1 |
| 1 |
| 1 |
+-----+
6 rows in set (0.00 sec)
```

40. Display manager number and salary of lowest paid employee for that manager. Exclude any one whose manager is not known. Exclude any group where minimum salary is less than 1000. Order you result on descending order of salary.

```
mysql> select mgr as Manager_Id,min(sal) as Min_Salary from emp where mgr is not null and sal >1000
group by mgr order by sal desc;
```

```
+-----+-----+
| Manager_Id | Min_Salary |
+-----+-----+
| 7566 | 3000.00 |
| 7839 | 2450.00 |
| 7698 | 1250.00 |
| 7782 | 1300.00 |
| 7788 | 1100.00 |
+-----+-----+
5 rows in set (0.00 sec)
```

41. Write a query which will display location wise number of people and their average salary. Average salary should be rounded to 2 decimal places.


```
mysql> select dept.loc as Location,emp.empno as Employee_No,emp.ename as Emp_Name,
round(avg(sal),2) as Avg_Salary from emp left join dept on emp.deptno=dept.deptno group by sal;
```

```
+-----+-----+-----+-----+
| Location | Employee_No | Emp_Name | Avg_Salary |
+-----+-----+-----+-----+
| CHICAGO | 7499 | ALLEN | 1600 |
| CHICAGO | 7521 | WARD | 1250 |
| DALLAS | 7566 | JONES | 2975 |
| CHICAGO | 7698 | BLAKE | 2850 |
| NEW YORK | 7782 | CLARK | 2450 |
| DALLAS | 7788 | SCOTT | 3000 |
| CHICAGO | 7844 | TURNER | 1500 |
| DALLAS | 7876 | ADAMS | 1100 |
| CHICAGO | 7900 | JAMES | 950 |
| DALLAS | 7369 | SMITH | 800 |
| NEW YORK | 7934 | MILLER | 1300 |
| NEW YORK | 7839 | KING | 5000 |
+-----+-----+-----+-----+
12 rows in set (0.00 sec)
```

42. Create a query which will give the following output ignore the lines.

Deptno	1980	1981	1982	1983	Total
10		2	1		3
20	1	2	1	1	5
30		6			6

```
select distinct deptno,(select count(*) from emp where extract(year from hiredate)='1980' and deptno=e.deptno)
as '1980',(select count(*) from emp where extract(year from hiredate)='1981' and deptno=e.deptno) as '1981'
,(select count(*) from emp where extract(year from hiredate)='1982' and deptno=e.deptno) as '1982',(select
count(*) from emp where extract(year from hiredate)='1983' and deptno=e.deptno) as '1983',(select count(*)
from emp where hiredate between '1980-01-01'and'1983-12-31' and deptno=e.deptno) as 'total'from emp e order
by deptno;
```

```
# deptno      1980      1981      1982      1983      total
10             0         2         1         0         3
20             1         2         1         1         5
30             0         6         0         0         6
```

43. Display Average commission of the table. Don't consider null values while finding the average commission.

```
mysql> select avg(comm) from emp where comm is not null;
+-----+
| avg(comm) |
+-----+
| 550.000000 |
+-----+
1 row in set (0.00 sec)
```

Sub Query

- 44. Write a query which will display name and job of all employees in the same department as Smith. Exclude Smith.**

```
mysql> select ename,job from emp where deptno in(select deptno from emp where ename="smith") and ename!="smith";
```

```
+-----+-----+
| ename | job   |
+-----+-----+
| JONES | MANAGER |
| SCOTT | ANALYST |
| ADAMS | CLERK   |
| FORD  | ANALYST |
+-----+-----+
4 rows in set (0.05 sec)
```

- 45. Create a query to display Employee number, name, salary of all employee who earns more than the average salary.**

```
mysql> select empno,ename,sal from emp where sal>(select avg(sal) from emp);
```

```
+-----+-----+-----+
| empno | ename | sal   |
+-----+-----+-----+
| 7566 | JONES | 2975.00 |
| 7698 | BLAKE | 2850.00 |
| 7782 | CLARK | 2450.00 |
| 7788 | SCOTT | 3000.00 |
| 7902 | FORD  | 3000.00 |
| 7839 | KING  | 5000.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)
```

- 46. Write a query to display all employee detail who works in department ACCOUNTS.**

```
mysql> select *from emp where deptno in (select deptno from dept where dname="accounting");
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR | HIREDATE | SAL   | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7782 | CLARK | MANAGER  | 7839 | 1981-06-09 | 2450.00 | NULL | 10 |
| 7934 | MILLER | CLERK    | 7782 | 1982-01-23 | 1300.00 | NULL | 10 |
| 7839 | KING  | PRESIDENT | NULL | 1981-11-23 | 5000.00 | NULL | 10 |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

- 47. Display name , salary of all employees who reports to BLAKE.**

```
mysql> select*from emp where mgr in (select empno from emp where ename="blake");
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB      | MGR | HIREDATE | SAL   | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499 | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600.00 | 300.00 | 30 |
| 7521 | WARD  | SALESMAN | 7698 | 1981-02-22 | 1250.00 | 500.00 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 1981-09-28 | 1250.00 | 1400.00 | 30 |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

```
| 7844 | TURNER | SALESMAN | 7698 | 1981-09-08 | 1500.00 | 0.00 | 30 |
| 7900 | JAMES | CLERK | 7698 | 1981-12-03 | 950.00 | NULL | 30 |
+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

48. Display employee detail of employee works for any department located at CHICAGO.

```
mysql> select*from emp where deptno in (select deptno from dept where loc="chicago");
```

```
+-----+-----+-----+-----+-----+-----+-----+
| EMPNO | ENAME | JOB | MGR | HIREDATE | SAL | COMM | DEPTNO |
+-----+-----+-----+-----+-----+-----+-----+
| 7499 | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600.00 | 300.00 | 30 |
| 7521 | WARD | SALESMAN | 7698 | 1981-02-22 | 1250.00 | 500.00 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 1981-09-28 | 1250.00 | 1400.00 | 30 |
| 7698 | BLAKE | MANAGER | 7839 | 1981-05-01 | 2850.00 | NULL | 30 |
| 7844 | TURNER | SALESMAN | 7698 | 1981-09-08 | 1500.00 | 0.00 | 30 |
| 7900 | JAMES | CLERK | 7698 | 1981-12-03 | 950.00 | NULL | 30 |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

49. Display employee number, salary, name of all employee who earns more than average salary and who works in a department with any employee with a T in their name.

```
mysql> select empno,ename,sal from emp where sal>(select avg(sal) from emp) and ename like "%t%";
-> //
```

```
+-----+-----+-----+
| empno | ename | sal |
+-----+-----+-----+
| 7788 | SCOTT | 3000.00 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

50. Write a query to display name, department number, and salary of any employee whose department number and salary matches department number and salary of any employee who earns commission.

```
mysql> SELECT ename, deptno, sal FROM emp WHERE (sal, deptno) IN (SELECT sal, deptno FROM emp WHERE comm!="NULL");
```

```
+-----+-----+-----+
| ename | deptno | sal |
+-----+-----+-----+
| ALLEN | 30 | 1600.00 |
| WARD | 30 | 1250.00 |
| MARTIN | 30 | 1250.00 |
+-----+-----+-----+
3 rows in set, 1 warning (0.00 sec)
```

51. Display name, department name, and salary of any employee whose salary and commission match salary and commission of any employee located in Dallas.

```
mysql> SELECT e.ename, d.dname, e.sal FROM emp e, dept d WHERE e.deptno = d.deptno AND (sal,ifnull(comm,0)) IN (SELECT sal, ifnull(comm,0) FROM emp e, dept d WHERE e.deptno = d.deptno AND d.loc = "DALLAS");
```

```
+-----+-----+-----+
```

ename	dname	sal
SMITH	RESEARCH	800.00
FORD	RESEARCH	3000.00
ADAMS	RESEARCH	1100.00
SCOTT	RESEARCH	3000.00
JONES	RESEARCH	2975.00

5 rows in set (0.01 sec)

52. Display ename, job and job of all employees who earns salary higher than salary of all Clerks. Sort the salary in highest to lowest.

```
mysql> select ename,job,sal from emp where sal > (select max(sal) from emp where job="clerk") order by sal desc;
```

ename	job	sal
KING	PRESIDENT	5000.00
SCOTT	ANALYST	3000.00
FORD	ANALYST	3000.00
JONES	MANAGER	2975.00
BLAKE	MANAGER	2850.00
CLARK	MANAGER	2450.00
ALLEN	SALESMAN	1600.00
TURNER	SALESMAN	1500.00

8 rows in set (0.00 sec)

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