DBMS

LAB Assignment-3

1. Create table **EMPLOYEE** with the following details.

FIELD NAME	TYPE
EMPLOYEE_ID	NUMBER(6)
LAST_NAME	VARCHAR2(25)
JOB_ID	VARCHAR2(10)
SALARY	NUMBER(8,2)
COMM_PCT	NUMBER (4,2)
MGR_ID	NUMBER (6)
DEPARTMENT_ID	NUMBER (4)

QUERY: CREATE TABLE EMPLOYEE (EMPLOYEE_ID INT(6),LAST_NAME VARCHAR(25),JOB_ID VARCHAR(10),SALARY DECIMAL(8,2),COMM_PCT DECIMAL (4,2),MGR_ID INT(6),DEPARTMENT_ID INT(4));

```
mysql> CREATE TABLE EMPLOYEE (EMPLOYEE_ID INT(6),LAST_NAME VARCHAR(25),JOB_ID VARCHAR(10),SALARY DECIMAL(8,2),COMM_PCT DECIMAL (4,2),MGR_ID INT(6),DEPARTMEN
T_ID INT(4));
Query OK, 0 rows affected, 3 warnings (0.403 sec)
```

2. Insert the following data into **EMPLOYEE** table.

EMPLOYEE_ID	LAST_NAME	JOB_ID	SALARY	COMM_PCT	MGR_ID	DEPARTMENT_ID
198	Connell	SH_CLERK	2600	2.5	124	50
199	Grant	SH_CLERK	2600	2.2	124	50
200	Whalen	AD_ASST	4400	1.3	101	10
201	Hartstein	IT_PROG	6000	null	100	20
202	Fay	AC_MGR	6500	null	210	20
203	Mavris	AD_VP	7500	null	101	40
204	Baer	AD_PRES	3500	1.5	101	90
205	Higgins	AC_MGR	2300	null	101	60
206	Gitz	IT_PROG	5000	null	103	60
100	King	AD_ASST	8956	0.3	108	100

101	Kochar	SH_CLERK	3400	1.3	118	30

QUERY: INSERT INTO EMPLOYEE VALUES
-> (198, 'Connell', 'SH_CLERK', 2600, 2.5, 124, 50),
-> (199, 'Grant', 'SH_CLERK', 2600, 2.2, 124, 50),
-> (200, 'Whalen', 'AD_ASST', 4400, 1.3, 101, 10),
-> (201, 'Hartstein', 'IT_PROG', 6000, NULL, 100, 20),
-> (202, 'Fay', 'AC_MGR', 6500, NULL, 210, 20),
-> (203, 'Mavris', 'AD_VP', 7500, NULL, 101, 40),
-> (204, 'Baer', 'AD_PRES', 3500, 1.5, 101, 90),
-> (205, 'Higgins', 'AC_MGR', 2300, NULL, 101, 60),
-> (206, 'Gitz', 'IT_PROG', 5000, NULL, 103, 60),
-> (100, 'King', 'AD_ASST', 8956, 0.3, 108, 100),
-> (101, 'Kochar', 'SH_CLERK', 3400, 1.3, 118, 30);

```
mysql> INSERT INTO EMPLOYEE (EMPLOYEE_ID, LAST_NAME, JOB_ID, SALARY, COMM_PCT, MGR_ID, DEPARTMENT_ID) VALUES
    -> (198, 'Connell', 'SH_CLERK', 2600, 2.5, 124, 50),
    -> (199, 'Grant', 'SH_CLERK', 2600, 2.2, 124, 50),
    -> (200, 'Whalen', 'AD_ASST', 4400, 1.3, 101, 10),
    -> (201, 'Hartstein', 'IT_PROG', 6000, NULL, 100, 20),
    -> (202, 'Fay', 'AC_MGR', 6500, NULL, 210, 20),
    -> (203, 'Mavris', 'AD_VP', 7500, NULL, 101, 40),
    -> (204, 'Baer', 'AD_PRES', 3500, 1.5, 101, 90),
    -> (205, 'Higgins', 'AC_MGR', 2300, NULL, 101, 60),
    -> (206, 'Gitz', 'IT_PROG', 5000, NULL, 103, 60),
    -> (100, 'King', 'AD_ASST', 8956, 0.3, 108, 100),
    -> (101, 'Kochar', 'SH_CLERK', 3400, 1.3, 118, 30);
Query OK, 11 rows affected (0.151 sec)
Records: 11  Duplicates: 0  Warnings: 0
```

3. Display last_name, job_id, employee_id for each employee with employee_id appearing first.

QUERY: SELECT last_name, job_id, employee_id FROM EMPLOYEE;

```
mysql> SELECT last_name, job_id, employee_id FROM EMPLOYEE;
+-----------+----------+-------------+
| last_name | job_id   | employee_id |
+-----------+----------+-------------+
| Connell   | SH_CLERK |         198 |
| Grant     | SH_CLERK |         199 |
| Whalen    | AD_ASST  |         200 |
| Hartstein | IT_PROG  |         201 |
| Fay       | AC_MGR   |         202 |
| Mavris    | AD_VP    |         203 |
| Baer      | AD_PRES  |         204 |
| Higgins   | AC_MGR   |         205 |
| Gitz      | IT_PROG  |         206 |
| King      | AD_ASST  |         100 |
| Kochar    | SH_CLERK |         101 |
+-----------+----------+-------------+
11 rows in set (0.020 sec)
```

4. Display the details of all employees of department 60.
   QUERY: SELECT * FROM EMPLOYEE WHERE DEPARTMENT_ID =60;

```
mysql> SELECT * FROM EMPLOYEE WHERE DEPARTMENT_ID =60;
+-------------+-----------+---------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID  | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+---------+---------+----------+--------+---------------+
|         205 | Higgins   | AC_MGR  | 2300.00 |     NULL |    101 |            60 |
|         206 | Gitz      | IT_PROG | 5000.00 |     NULL |    103 |            60 |
+-------------+-----------+---------+---------+----------+--------+---------------+
2 rows in set (0.089 sec)
```

5. Display the employee details of the employee whose last_name is King.
   QUERY: SELECT * FROM EMPLOYEE WHERE LAST_NAME = 'King';

```
mysql> SELECT *
    -> FROM EMPLOYEE
    -> WHERE LAST_NAME = 'King';
+-------------+-----------+---------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID  | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+---------+---------+----------+--------+---------------+
|         100 | King      | AD_ASST | 8956.00 |     0.30 |    108 |           100 |
+-------------+-----------+---------+---------+----------+--------+---------------+
1 row in set (0.010 sec)
```

6. Display unique job_id from **EMPLOYEE** table. Give alias name to the column as JOB_TITLE.
   QUERY: SELECT DISTINCT JOB_ID AS JOB_TITLE FROM EMPLOYEE;

```
mysql> SELECT DISTINCT JOB_ID AS JOB_TITLE FROM EMPLOYEE;
+-----------+
| JOB_TITLE |
+-----------+
| SH_CLERK  |
| AD_ASST   |
| IT_PROG   |
| AC_MGR    |
| AD_VP     |
| AD_PRES   |
+-----------+
6 rows in set (0.102 sec)
```

7. Display last_name, salary and salary increase of Rs300. Give the new column name as ‘Increased Salary’.
   QUERY: SELECT LAST_NAME, SALARY (SALARY + 300) AS Increased_Salary FROM EMPLOYEE;

```
mysql> SELECT LAST_NAME, SALARY,(SALARY + 300) AS Increased_Salary FROM EMPLOYEE;
+-----------+---------+-----------------+
| LAST_NAME | SALARY  | Increased_Salary |
+-----------+---------+-----------------+
| Connell   | 2600.00 |          2900.00 |
| Grant     | 2600.00 |          2900.00 |
| Whalen    | 4400.00 |          4700.00 |
| Hartstein | 6000.00 |          6300.00 |
| Fay       | 6500.00 |          6800.00 |
| Mavris    | 7500.00 |          7800.00 |
| Baer      | 3500.00 |          3800.00 |
| Higgins   | 2300.00 |          2600.00 |
| Gitz      | 5000.00 |          5300.00 |
| King      | 8956.00 |          9256.00 |
| Kochar    | 3400.00 |          3700.00 |
+-----------+---------+-----------------+
11 rows in set (0.014 sec)
```

8. Display last_name, salary and **annual** compensation of all employees, plus a onetime bonus of Rs 100. Give an alias name to the column displaying annual compensation.
QUERY: SELECT LAST_NAME, SALARY, ((SALARY*COMM_PCT)*12)+100) AS ANNUAL_COMPENSATION FROM EMPLOYEE;

```
mysql> SELECT LAST_NAME, SALARY, ((12*SALARY*COMM_PCT)+100) AS ANNUAL_COMPENSATION FROM EMPLOYEE;
+-----------+---------+--------------------+
| LAST_NAME | SALARY  | ANNUAL_COMPENSATION |
+-----------+---------+--------------------+
| Connell   | 2600.00 |         78100.0000 |
| Grant     | 2600.00 |         68740.0000 |
| Whalen    | 4400.00 |         68740.0000 |
| Hartstein | 6000.00 |               NULL |
| Fay       | 6500.00 |               NULL |
| Mavris    | 7500.00 |               NULL |
| Baer      | 3500.00 |         63100.0000 |
| Higgins   | 2300.00 |               NULL |
| Gitz      | 5000.00 |               NULL |
| King      | 8956.00 |         32341.6000 |
| Kochar    | 3400.00 |         53140.0000 |
+-----------+---------+--------------------+
11 rows in set (0.018 sec)
```

9. Display the details of those employees who get commission.
QUERY: SELECT * FROM EMPLOYEE WHERE COMM_PCT IS NOT NULL;

```
mysql> SELECT * FROM EMPLOYEE WHERE COMM_PCT IS NOT NULL;
+-------------+-----------+----------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID   | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+----------+---------+----------+--------+---------------+
|         198 | Connell   | SH_CLERK | 2600.00 |     2.50 |    124 |            50 |
|         199 | Grant     | SH_CLERK | 2600.00 |     2.20 |    124 |            50 |
|         200 | Whalen    | AD_ASST  | 4400.00 |     1.30 |    101 |            10 |
|         204 | Baer      | AD_PRES  | 3500.00 |     1.50 |    101 |            90 |
|         100 | King      | AD_ASST  | 8956.00 |     0.30 |    108 |           100 |
|         101 | Kochar    | SH_CLERK | 3400.00 |     1.30 |    118 |            30 |
+-------------+-----------+----------+---------+----------+--------+---------------+
6 rows in set (0.014 sec)
```

10. Display the details of those employees who do not get commission.
QUERY: SELECT * FROM EMPLOYEE WHERE COMM_PCT IS NULL;

```
mysql> SELECT * FROM EMPLOYEE WHERE COMM_PCT IS NULL;
+-------------+-----------+---------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID  | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+---------+---------+----------+--------+---------------+
|         201 | Hartstein | IT_PROG | 6000.00 |     NULL |    100 |            20 |
|         202 | Fay       | AC_MGR  | 6500.00 |     NULL |    210 |            20 |
|         203 | Mavris    | AD_VP   | 7500.00 |     NULL |    101 |            40 |
|         205 | Higgins   | AC_MGR  | 2300.00 |     NULL |    101 |            60 |
|         206 | Gitz      | IT_PROG | 5000.00 |     NULL |    103 |            60 |
+-------------+-----------+---------+---------+----------+--------+---------------+
5 rows in set (0.014 sec)
```

11. Display the Employee_id, Department_id and Salary all employees whose salary is greater than 5000.
QUERY: SELECT EMPLOYEE_ID, DEPARTMENT_ID, SALARY FROM EMPLOYEE WHERE SALARY>5000;

```
mysql> SELECT EMPLOYEE_ID, DEPARTMENT_ID, SALARY FROM EMPLOYEE WHERE SALARY>5000;
+-------------+---------------+---------+
| EMPLOYEE_ID | DEPARTMENT_ID | SALARY  |
+-------------+---------------+---------+
|         201 |            20 | 6000.00 |
|         202 |            20 | 6500.00 |
|         203 |            40 | 7500.00 |
|         100 |           100 | 8956.00 |
+-------------+---------------+---------+
4 rows in set (0.100 sec)
```

12. Display the Last_Name and Salary of all employees whose salary is between 4000 and 7000.
QUERY: SELECT LAST_NAME, SALARY FROM EMPLOYEE WHERE SALARY BETWEEN 4000 AND 7000;

```
mysql> SELECT LAST_NAME, SALARY FROM EMPLOYEE WHERE SALARY BETWEEN 4000 AND 7000;
+-----------+---------+
| LAST_NAME | SALARY  |
+-----------+---------+
| Whalen    | 4400.00 |
| Hartstein | 6000.00 |
| Fay       | 6500.00 |
| Gitz      | 5000.00 |
+-----------+---------+
4 rows in set (0.020 sec)
```

13. Display the details of all employees whose salary is either 6000 or 6500 or 7000.
QUERY: SELECT * FROM EMPLOYEE WHERE SALARY IN(6000,6500,7000);

```
mysql> SELECT * FROM EMPLOYEE WHERE SALARY IN(6000,6500,7000);
+-------------+-----------+---------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID  | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+---------+---------+----------+--------+---------------+
|         201 | Hartstein | IT_PROG | 6000.00 |     NULL |    100 |            20 |
|         202 | Fay       | AC_MGR  | 6500.00 |     NULL |    210 |            20 |
+-------------+-----------+---------+---------+----------+--------+---------------+
2 rows in set (0.010 sec)
```

14. Display the details of all those employees who work either in department 10 or 20 or 30 or 50.

QUERY: SELECT * FROM EMPLOYEE WHERE DEPARTMENT_ID IN(10,20,30,50);

```
mysql> SELECT * FROM EMPLOYEE WHERE DEPARTMENT_ID IN(10,20,30,50);
+-------------+-----------+----------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID   | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+----------+---------+----------+--------+---------------+
|         198 | Connell   | SH_CLERK | 2600.00 |     2.50 |    124 |            50 |
|         199 | Grant     | SH_CLERK | 2600.00 |     2.20 |    124 |            50 |
|         200 | Whalen    | AD_ASST  | 4400.00 |     1.30 |    101 |            10 |
|         201 | Hartstein | IT_PROG  | 6000.00 |     NULL |    100 |            20 |
|         202 | Fay       | AC_MGR   | 6500.00 |     NULL |    210 |            20 |
|         101 | Kochar    | SH_CLERK | 3400.00 |     1.30 |    118 |            30 |
+-------------+-----------+----------+---------+----------+--------+---------------+
6 rows in set (0.101 sec)
```

15. Display the details of all employees whose salary is not equal to 5000.

QUERY: SELECT * FROM EMPLOYEE WHERE SALARY!= 5000;

```
mysql> SELECT * FROM EMPLOYEE WHERE SALARY!= 5000;
+-------------+-----------+----------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID   | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+----------+---------+----------+--------+---------------+
|         198 | Connell   | SH_CLERK | 2600.00 |     2.50 |    124 |            50 |
|         199 | Grant     | SH_CLERK | 2600.00 |     2.20 |    124 |            50 |
|         200 | Whalen    | AD_ASST  | 4400.00 |     1.30 |    101 |            10 |
|         201 | Hartstein | IT_PROG  | 6000.00 |     NULL |    100 |            20 |
|         202 | Fay       | AC_MGR   | 6500.00 |     NULL |    210 |            20 |
|         203 | Mavris    | AD_VP    | 7500.00 |     NULL |    101 |            40 |
|         204 | Baer      | AD_PRES  | 3500.00 |     1.50 |    101 |            90 |
|         205 | Higgins   | AC_MGR   | 2300.00 |     NULL |    101 |            60 |
|         100 | King      | AD_ASST  | 8956.00 |     0.30 |    108 |           100 |
|         101 | Kochar    | SH_CLERK | 3400.00 |     1.30 |    118 |            30 |
+-------------+-----------+----------+---------+----------+--------+---------------+
10 rows in set (0.018 sec)
```

16. Display the details of all the CLERKS working in the organization.

QUERY: SELECT * FROM EMPLOYEE WHERE JOB_ID LIKE ‘%CLERK’;

```
mysql> SELECT *
    -> FROM EMPLOYEE
    -> WHERE JOB_ID LIKE '%CLERK';
+-------------+-----------+----------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID   | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+----------+---------+----------+--------+---------------+
|         198 | Connell   | SH_CLERK | 2600.00 |     2.50 |    124 |            50 |
|         199 | Grant     | SH_CLERK | 2600.00 |     2.20 |    124 |            50 |
|         101 | Kochar    | SH_CLERK | 3400.00 |     1.30 |    118 |            30 |
+-------------+-----------+----------+---------+----------+--------+---------------+
3 rows in set (0.098 sec)
```

17. Update the job_id's of the employees who earn more than 5000 to Grade_A. Display the table **EMPLOYEE** after updating.
QUERY: UPDATE EMPLOYEE TABLE SET JOB_ID = 'Grade_A' WHERE SALARY>5000;

```
mysql> UPDATE EMPLOYEE SET JOB_ID = 'Grade_A' WHERE SALARY > 5000;
Query OK, 4 rows affected (0.119 sec)
Rows matched: 4  Changed: 4  Warnings: 0
```

SELECT * FROM EMPLOYEE;

```
mysql> SELECT * FROM EMPLOYEE;
+-------------+-----------+----------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID   | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+----------+---------+----------+--------+---------------+
|         198 | Connell   | SH_CLERK | 2600.00 |     2.50 |    124 |            50 |
|         199 | Grant     | SH_CLERK | 2600.00 |     2.20 |    124 |            50 |
|         200 | Whalen    | AD_ASST  | 4400.00 |     1.30 |    101 |            10 |
|         201 | Hartstein | Grade_A  | 6000.00 |     NULL |    100 |            20 |
|         202 | Fay       | Grade_A  | 6500.00 |     NULL |    210 |            20 |
|         203 | Mavris    | Grade_A  | 7500.00 |     NULL |    101 |            40 |
|         204 | Baer      | AD_PRES  | 3500.00 |     1.50 |    101 |            90 |
|         205 | Higgins   | AC_MGR   | 2300.00 |     NULL |    101 |            60 |
|         206 | Gitz      | IT_PROG  | 5000.00 |     NULL |    103 |            60 |
|         100 | King      | Grade_A  | 8956.00 |     0.30 |    108 |           100 |
|         101 | Kochar    | SH_CLERK | 3400.00 |     1.30 |    118 |            30 |
+-------------+-----------+----------+---------+----------+--------+---------------+
11 rows in set (0.012 sec)
```

18. Display the details of all those employees who are either CLERK or PROGRAMMER or ASSISTANT.
QUERY: SELECT * FROM EMPLOYEE WHERE LAST_NAME LIKE '%CLERK' OR '%PROG' OR 'ASST';

```
mysql> SELECT * FROM EMPLOYEE WHERE JOB_ID LIKE '%CLERK' OR JOB_ID LIKE '%PROG' OR JOB_ID LIKE '%ASST';
+-------------+-----------+----------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID   | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+----------+---------+----------+--------+---------------+
|         198 | Connell   | SH_CLERK | 2600.00 |     2.50 |    124 |            50 |
|         199 | Grant     | SH_CLERK | 2600.00 |     2.20 |    124 |            50 |
|         200 | Whalen    | AD_ASST  | 4400.00 |     1.30 |    101 |            10 |
|         206 | Gitz      | IT_PROG  | 5000.00 |     NULL |    103 |            60 |
|         101 | Kochar    | SH_CLERK | 3400.00 |     1.30 |    118 |            30 |
+-------------+-----------+----------+---------+----------+--------+---------------+
5 rows in set (0.016 sec)
```

19. Display those employees from the **EMPLOYEE** table whose designation is CLERK and salary is less than 3000.
QUERY: SELECT * FROM EMPLOYEE WHERE JOB_ID LIKE '%CLERK' AND SALARY<3000;

```
mysql> SELECT * FROM EMPLOYEE WHERE JOB_ID LIKE '%CLERK' AND SALARY < 3000;
+-------------+-----------+----------+---------+----------+--------+---------------+
| EMPLOYEE_ID | LAST_NAME | JOB_ID   | SALARY  | COMM_PCT | MGR_ID | DEPARTMENT_ID |
+-------------+-----------+----------+---------+----------+--------+---------------+
|         198 | Connell   | SH_CLERK | 2600.00 |     2.50 |    124 |            50 |
|         199 | Grant     | SH_CLERK | 2600.00 |     2.20 |    124 |            50 |
+-------------+-----------+----------+---------+----------+--------+---------------+
2 rows in set (0.015 sec)
```

20. Display those employees Last_Name, Mgr_id from the **EMPLOYEE** table whose salary is above 3000 and work under Manager 101.
QUERY: SELECT LAST_NAME, MGR_ID FROM EMPLOYEE WHERE SALARY>3000 AND MGR_ID = 101;

```
mysql> SELECT LAST_NAME, MGR_ID FROM EMPLOYEE WHERE SALARY>3000 AND MGR_ID = 101;
+-----------+--------+
| LAST_NAME | MGR_ID |
+-----------+--------+
| Whalen    |    101 |
| Mavris    |    101 |
| Baer      |    101 |
+-----------+--------+
3 rows in set (0.013 sec)
```