**Ankita Balasaheb Dhumal**

**SQL Exercise 1**

1. Create the table SEMP with the following structure:-

EMPNO CHAR(4)

EMPNAME CHAR(20)

BASIC FLOAT

DEPTNO CHAR(2)

DEPTHEAD CHAR(4)

**Ans :**

C:\Windows\system32>mysql -u ankita -p

Enter password: \*\*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 28

Server version: 9.0.1 MySQL Community Server - GPL

Copyright (c) 2000, 2024, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its

affiliates. Other names may be trademarks of their respective

owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> SHOW DATABASES;

+--------------------+

| Database |

+--------------------+

| classwork1 |

| information\_schema |

| performance\_schema |

+--------------------+

3 rows in set (0.00 sec)

mysql> USE classwork1;

Database changed

mysql> CREATE TABLE SEMP(

-> EMPNO CHAR(4), EMPNAME CHAR(20), BASIC FLOAT, DEPTNO CHAR(2), DEPTHEAD CHAR(4) );

Query OK, 0 rows affected (0.05 sec)

mysql> show tables;

+----------------------+

| Tables\_in\_classwork1 |

+----------------------+

| semp |

+----------------------+

1 row in set (0.00 sec)

mysql> desc semp;

+----------+----------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------+----------+------+-----+---------+-------+

| EMPNO | char(4) | YES | | NULL | |

| EMPNAME | char(20) | YES | | NULL | |

| BASIC | float | YES | | NULL | |

| DEPTNO | char(2) | YES | | NULL | |

| DEPTHEAD | char(4) | YES | | NULL | |

+----------+----------+------+-----+---------+-------+

5 rows in set (0.01 sec)

1. **Create the table SDEPT with the following structure:-**

**DEPTNO CHAR(2)**

**DEPTNAME CHAR(15)**

**Ans :**

mysql> create table SDEPT ( DEPTNO CHAR(2), DEPTNAME CHAR(15));

Query OK, 0 rows affected (0.03 sec)

mysql> SHOW TABLES;

+----------------------+

| Tables\_in\_classwork1 |

+----------------------+

| sdept |

| semp |

+----------------------+

2 rows in set (0.00 sec)

mysql> DESC SDEPT;

+----------+----------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------+----------+------+-----+---------+-------+

| DEPTNO | char(2) | YES | | NULL | |

| DEPTNAME | char(15) | YES | | NULL | |

+----------+----------+------+-----+---------+-------+

2 rows in set (0.00 sec)

1. **Insert into the SDEPT table the following values:-**

**10, Development**

**20, Training**

**Ans :**

mysql> insert into sdept(deptno, deptname) values('10', 'Development'),('20', 'Training');

Query OK, 2 rows affected (0.02 sec)

Records: 2 Duplicates: 0 Warnings: 0

mysql> select \* from sdept;

+--------+-------------+

| DEPTNO | DEPTNAME |

+--------+-------------+

| 10 | Development |

| 20 | Training |

+--------+-------------+

1. **Insert into the SEMP table the following values:-**

**0001, SUNIL, 6000, 10**

**0002, HIREN, 8000, 20**

**0003, ALI, 4000, 10, 0001**

**0004, GEORGE, 6000, 0002**

**Ans :**

mysql> INSERT INTO SEMP (EMPNO, EMPNAME, BASIC, DEPTNO, DEPTHEAD)

-> VALUES

-> ('0001', 'SUNIL', 6000, '10', NULL),

-> ('0002', 'HIREN', 8000, '20', NULL),

-> ('0003', 'ALI', 4000, '10', '0001'),

-> ('0004', 'GEORGE', 6000, '20', '0002');

Query OK, 4 rows affected (0.01 sec)

Records: 4 Duplicates: 0 Warnings: 0

mysql> select \* from semp;

+-------+---------+-------+--------+----------+

| EMPNO | EMPNAME | BASIC | DEPTNO | DEPTHEAD |

+-------+---------+-------+--------+----------+

| 0001 | SUNIL | 6000 | 10 | NULL |

| 0002 | HIREN | 8000 | 20 | NULL |

| 0003 | ALI | 4000 | 10 | 0001 |

| 0004 | GEORGE | 6000 | 20 | 0002 |

+-------+---------+-------+--------+----------+

**Create S, P, J, SPJ tables as specified below and insert a few rows in each table:-**

|  |  |  |
| --- | --- | --- |
| **SUPPLIER**  **(S#, Sname, Status, City)** | **-** | **S** |
| **PARTS**  **(P#, Pname, Color, Weight, City)** | **-** | **P** |
| **PROJECTS**  **(J#, Jname, City)** | **-** | **J** |
| **SUPPLIER-PARTS-PROJECT**  **(S#, P#, J#, Qty)** | **-** | **SPJ** |

**Sample data for S# column:- ‘S1’, ‘S2’, ‘S3’, etc.**

**Sample data for P# column:- ‘P1’, ‘P2’, ‘P3’, etc.**

**Sample data for J# column:- ‘J1’, ‘J2’, ‘J3’, etc.**

**Sample data for Status column:- 10, 20, 30, etc.**

**ANS :**

mysql> SELECT \* FROM S;

+------+----------+--------+-----------+

| S# | Sname | Status | City |

+------+----------+--------+-----------+

| S1 | Tata | 30 | Pune |

| S2 | Reliance | 20 | Mumbai |

| S3 | Infosys | 10 | Bangalore |

+------+----------+--------+-----------+

3 rows in set (0.00 sec)

mysql> SELECT \* FROM P;

+------+-------+-------+--------+--------+

| P# | Pname | Color | Weight | City |

+------+-------+-------+--------+--------+

| P1 | Bolt | Red | 1.5 | Pune |

| P2 | Nut | Blue | 0.5 | Mumbai |

| P3 | Screw | Black | 0.8 | Delhi |

+------+-------+-------+--------+--------+

3 rows in set (0.00 sec)

mysql> SELECT \* FROM J;

+------+--------+--------+

| J# | Jname | City |

+------+--------+--------+

| J1 | Metro | Mumbai |

| J2 | Bridge | Pune |

| J3 | Tower | Delhi |

+------+--------+--------+

3 rows in set (0.00 sec)

mysql> ^C

mysql> SELECT \* FROM SPJ;

+------+------+------+------+

| S# | P# | J# | Qty |

+------+------+------+------+

| S1 | P1 | J1 | 100 |

| S2 | P2 | J2 | 200 |

| S3 | P3 | J3 | 150 |

+------+------+------+------+

**Write the SELECT queries to do the following:-**

1. **Display all the data from the S table.**

**Ans :**

mysql> SELECT \* FROM S;

+------+----------+--------+-----------+

| S# | Sname | Status | City |

+------+----------+--------+-----------+

| S1 | Tata | 30 | Pune |

| S2 | Reliance | 20 | Mumbai |

| S3 | Infosys | 10 | Bangalore |

+------+----------+--------+-----------+

1. **Display only the S# and SNAME fields from the S table.**

**Ans :**

SELECT `S#`, Sname FROM S;

+------+----------+

| S# | Sname |

+------+----------+

| S1 | Tata |

| S2 | Reliance |

| S3 | Infosys |

+------+----------+

1. **Display the PNAME and COLOR from the P table for the CITY=”London”.**

**Ans :**

mysql> SELECT Pname, Color

-> FROM P

-> WHERE City = 'London';

Empty set (0.01 sec)

1. **Display all the Suppliers from London.**

**Ans :**

mysql> SELECT \*

-> FROM S

-> WHERE City = 'London';

Empty set (0.00 sec)

1. **Display all the Suppliers from Paris or Athens.**

**Ans :**

SELECT \*

-> FROM S

-> WHERE City = 'Paris' OR City = 'Athens';

Empty set (0.00 sec)

1. **Display all the Projects in Athens.**

**Ans :**

SELECT \*

-> FROM J

-> WHERE City = 'Athens';

1. **Display all the Partnames with the weight between 12 and 14 (inclusive of both).**

**Ans :**

SELECT Pname

-> FROM P

-> WHERE Weight BETWEEN 12 AND 14;

1. **Display all the Suppliers with a Status greater than or equal to 20.**

**Ans :**

SELECT \*

-> FROM S

-> WHERE Status >= 20;

+------+----------+--------+--------+

| S# | Sname | Status | City |

+------+----------+--------+--------+

| S1 | Tata | 30 | Pune |

| S2 | Reliance | 20 | Mumbai |

+------+----------+--------+--------+

1. **Display all the Suppliers except the Suppliers from London.**

**Ans :**

mysql> SELECT \*

-> FROM S

-> WHERE City != 'London';

+------+----------+--------+-----------+

| S# | Sname | Status | City |

+------+----------+--------+-----------+

| S1 | Tata | 30 | Pune |

| S2 | Reliance | 20 | Mumbai |

| S3 | Infosys | 10 | Bangalore |

+------+----------+--------+-----------+

1. **Display only the Cities from where the Suppliers come from.**

**Ans:**

mysql> SELECT City

-> FROM S;

+-----------+

| City |

+-----------+

| Pune |

| Mumbai |

| Bangalore |

+-----------+

1. **Assuming that the Part Weight is in GRAMS, display the same in MILLIGRAMS and KILOGRAMS.**

**Ans :** mysql> SELECT

-> Pname,

-> Weight AS Grams,

-> Weight \* 1000 AS Milligrams,

-> Weight / 1000 AS Kilograms

-> FROM P;

+-------+-------+------------------+-----------------------+

| Pname | Grams | Milligrams | Kilograms |

+-------+-------+------------------+-----------------------+

| Bolt | 1.5 | 1500 | 0.0015 |

| Nut | 0.5 | 500 | 0.0005 |

| Screw | 0.8 | 800.000011920929 | 0.0008000000119209289 |

+-------+-------+------------------+-----------------------+