

Exercise 1

```
MySQL 8.0 Command Line Cli  X  +  v
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 22
Server version: 8.0.41 MySQL Community Server - GPL

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owners.

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

mysql> mysql -u exercise -p
->
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use
near 'mysql -u exercise -p' at line 1
mysql> select current_user();
+-----+
| current_user() |
+-----+
| root@localhost |
+-----+
1 row in set (0.00 sec)

mysql> system mysql -u exercise -p
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 23
Server version: 8.0.41 MySQL Community Server - GPL

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

mysql> select current_user();
+-----+
| current_user() |
+-----+
```

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mysql> select current_user();
+-----+
| current_user() |
+-----+
| exercise@localhost |
+-----+
1 row in set (0.00 sec)

mysql> create database exercise;
Query OK, 1 row affected (0.00 sec)

mysql> use exercise;
Database changed
mysql> show databases;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use
near 'databases' at line 1
mysql> show databases;
+-----+
| Database |
+-----+
| exercise |
| information_schema |
| mydatabase |
| mysql |
| performance_schema |
| practice1 |
| sys |
+-----+
7 rows in set (0.00 sec)

mysql> create table semp(EMPNO char(4), EMPNAME char(20), BASIC float, DEPTNO char(2), DEPTHEAD char(4));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use
near 'float, DEPTNO char(2), DEPTHEAD char(4))' at line 1
mysql> create table semp(EMPNO char(4), EMPNAME char(20), BASIC float, DEPTNO char(2), DEPTHEAD char(4));
Query OK, 0 rows affected (0.00 sec)
ERROR 1050 (42S01): Table 'semp' already exists
mysql>
mysql> show tables;
+-----+
| Tables_in_exercise |
+-----+
| semp |
+-----+
```

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MySQL 8.0 Command Line CLI X + v
mysql>
mysql> show tables;
+-----+
| Tables_in_exercise |
+-----+
| semp                |
+-----+
1 row in set (0.00 sec)

mysql> create table sdept(DEPTNO char(2), DEPTNAME char(15));
Query OK, 0 rows affected (0.01 sec)

mysql> insert into sdept values(10,'Development');
Query OK, 1 row affected (0.00 sec)

mysql> insert into sdept values(20,'Training');
Query OK, 1 row affected (0.00 sec)

mysql> select * from sdept;
+-----+-----+
| DEPTNO | DEPTNAME |
+-----+-----+
| 10     | Development |
| 20     | Training   |
+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from semp;
Empty set (0.00 sec)

mysql> insert into semp values(0001,'SUNIL',6000,10);
ERROR 1136 (21501): Column count doesn't match value count at row 1
mysql> insert into semp values(0001,'SUNIL',5.1,6000,10);
ERROR 1406 (22001): Data too long for column 'DEPTNO' at row 1
mysql> insert into semp values(0001,'SUNIL',6000,10,NULL);
Query OK, 1 row affected (0.00 sec)

mysql> insert into semp values(0002,'HIREN',8000,20,NULL);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '8000,20,NULL)' at line 1
mysql> insert into semp values(0002,'HIREN',8000,20,NULL);
Query OK, 1 row affected (0.00 sec)
```

```
MySQL 8.0 Command Line CLI X + v
ERROR 1406 (22001): Data too long for column 'DEPTNO' at row 1
mysql> insert into semp values(0001,'SUNIL',6000,10,NULL);
Query OK, 1 row affected (0.00 sec)

mysql> insert into semp values(0002,'HIREN',8000,20,NULL);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '8000,20,NULL)' at line 1
mysql> insert into semp values(0002,'HIREN',8000,20,NULL);
Query OK, 1 row affected (0.00 sec)

mysql> insert into semp values(0003,'ALI',4000,10,0001);
Query OK, 1 row affected (0.00 sec)

mysql> insert into semp values(0004,'GEORGE',6000,0002,NULL);
Query OK, 1 row affected (0.00 sec)

mysql> select * from semp;
+-----+-----+-----+-----+-----+
| EMPNO | EMPNAME | BASIC | DEPTNO | DEPTHEAD |
+-----+-----+-----+-----+-----+
| 1     | SUNIL   | 6000  | 10     | NULL     |
| 2     | HIREN   | 8000  | 20     | NULL     |
| 3     | ALI     | 4000  | 10     | 1        |
| 4     | GEORGE  | 6000  | 2      | NULL     |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> create table S(S# char(2), Sname varchar(20), Status int, City varchar(20));
->
;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1
mysql> create table S (S# char(2), Sname varchar(20),Status int, City varchar(20));
->
;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1
mysql> CREATE TABLE S (
->   S# CHAR(2),
->   Sname VARCHAR(20),
->   Status INT,
->   City VARCHAR(20)
-> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use
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```
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near '' at line 1
mysql> create table S ('S#' char(2), Sname varchar(20), Status int, City varchar(20));
Query OK, 0 rows affected (0.01 sec)

mysql> create table P ('P#' char(2), Pname varchar(20), Color varchar(10), Weight float, City varchar(20));
Query OK, 0 rows affected (0.01 sec)

mysql> create table J ('J#' char(2), Jname varchar(20), City varchar(20));
Query OK, 0 rows affected (0.01 sec)

mysql> create table SPJ ('S#' char(2), 'P#' char(2), 'J#' char(2), Qty int);
Query OK, 0 rows affected (0.01 sec)

mysql> insert into S values('S1','Vaishnavi',20,'Nanded');
Query OK, 1 row affected (0.00 sec)

mysql> insert into S values('S2','Pallavi',30,'Pune');
Query OK, 1 row affected (0.00 sec)

mysql> insert into S values('S3','Malhari',10,'Mumbai');
Query OK, 1 row affected (0.00 sec)

mysql> select * from S;
+-----+-----+-----+-----+
| S# | Sname      | Status | City    |
+-----+-----+-----+-----+
| S1 | Vaishnavi  | 20     | Nanded  |
| S2 | Pallavi    | 30     | Pune    |
| S3 | Malhari    | 10     | Mumbai  |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> insert into P values('P1','Pen','Blue',5.2,'Nanded');
Query OK, 1 row affected (0.00 sec)

mysql> insert into P values('P2','Pencil','Black',8.1,'Pune');
Query OK, 1 row affected (0.00 sec)

mysql> insert into P values('P3','Book','Pink',12.3,'Nashik');
Query OK, 1 row affected (0.00 sec)

mysql> select * from P;
+-----+-----+-----+-----+
Query OK, 1 row affected (0.00 sec)

mysql> select * from P;
+-----+-----+-----+-----+
| P# | Pname      | Color  | Weight | City    |
+-----+-----+-----+-----+
| P1 | Pen        | Blue   | 5.2     | Nanded  |
| P2 | Pencil     | Black  | 8.1     | Pune    |
| P3 | Book       | Pink   | 12.3    | Nashik  |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> insert into J values('J1','Alpha','Mumbai');
Query OK, 1 row affected (0.00 sec)

mysql> insert into J values('J2','Beta','Nagpur');
Query OK, 1 row affected (0.00 sec)

mysql> insert into J values('J3','Gamma','Pune');
Query OK, 1 row affected (0.00 sec)

mysql> select * from J;
+-----+-----+-----+
| J# | Jname      | City    |
+-----+-----+-----+
| J1 | Alpha      | Mumbai  |
| J2 | Beta       | Nagpur  |
| J3 | Gamma      | Pune    |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> insert into SPJ values('S1','P1','J1',300);
Query OK, 1 row affected (0.00 sec)

mysql> insert into SPJ values('S1','P2','J2',200);
Query OK, 1 row affected (0.00 sec)

mysql> insert into SPJ values('S2','P1','J1',100);
Query OK, 1 row affected (0.00 sec)

mysql> insert into SPJ values('S3','P3','J3',150);
Query OK, 1 row affected (0.00 sec)
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mysql> insert into SPJ values('S2','P1','J1',100);
Query OK, 1 row affected (0.00 sec)

mysql> insert into SPJ values('S3','P3','J3',150);
Query OK, 1 row affected (0.00 sec)

mysql> select * from SPJ;
+----+----+----+----+
| S# | P# | J# | Qty |
+----+----+----+----+
| S1 | P1 | J1 | 300 |
| S1 | P2 | J2 | 200 |
| S2 | P1 | J1 | 100 |
| S3 | P3 | J3 | 150 |
+----+----+----+----+
4 rows in set (0.00 sec)

mysql> select * from S where City = 'Nanded';
+----+-----+-----+-----+
| S# | Sname | Status | City |
+----+-----+-----+-----+
| S1 | Vaishnavi | 20 | Nanded |
+----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from P where Color = 'Pink';
+----+-----+-----+-----+-----+
| P# | Pname | Color | Weight | City |
+----+-----+-----+-----+-----+
| P3 | Book | Pink | 12.3 | Nashik |
+----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from J where City = 'Nagpur';
+----+-----+-----+
| J# | Jname | City |
+----+-----+-----+
| J2 | Beta | Nagpur |
+----+-----+-----+
1 row in set (0.00 sec)

mysql> select distinct S.* from S join SPJ on S.'S#' = SPJ.'S#' where SPJ.'p#' = 'P1';
+----+-----+-----+-----+
| S# | Sname | Status | City |
+----+-----+-----+-----+
| S1 | Vaishnavi | 20 | Nanded |
| S2 | Pallavi | 30 | Pune |
+----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select distinct SPJ.'S#', SUM(Qty) as Total_Qty from SPJ group by SPJ.'S#';
+----+-----+
| S# | Total_Qty |
+----+-----+
| S1 | 500 |
| S2 | 100 |
| S3 | 150 |
+----+-----+
3 rows in set (0.00 sec)

mysql> select distinct S.Sname, J.Jname, S.City from S join J on S.City = J.City;
+-----+-----+-----+
| Sname | Jname | City |
+-----+-----+-----+
| Malhari | Alpha | Mumbai |
| Pallavi | Gamma | Pune |
+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select 'S#', Sname from S;
+----+-----+
| S# | Sname |
+----+-----+
| S1 | Vaishnavi |
| S2 | Pallavi |
| S3 | Malhari |
+----+-----+
3 rows in set (0.00 sec)

mysql> select 'Pname', 'Color' from P where City = 'Pune';
+-----+-----+
| Pname | Color |
+-----+-----+

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3 rows in set (0.00 sec)

mysql> select 'Pname', 'Color' from P where City = 'Pune';
+-----+-----+
| Pname | Color |
+-----+-----+
| Pname | Color |
+-----+-----+
1 row in set (0.00 sec)

mysql> select Pname, Color from P where City = 'Pune';
+-----+-----+
| Pname | Color |
+-----+-----+
| Pensil | Black |
+-----+-----+
1 row in set (0.00 sec)

mysql> select * from S where City = 'Mumbai';
+-----+-----+-----+-----+
| S# | Sname | Status | City |
+-----+-----+-----+-----+
| S3 | Malhari | 10 | Mumbai |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from S where City in('Pune','Nashik');
+-----+-----+-----+-----+
| S# | Sname | Status | City |
+-----+-----+-----+-----+
| S2 | Pallavi | 30 | Pune |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from J where City = 'Parbhani';
Empty set (0.00 sec)

mysql> select * from J where City = 'Pune';
+-----+-----+-----+
| J# | Jname | City |
+-----+-----+-----+
| J3 | Gamma | Pune |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select Pname from P where weight between 12 and 14;
+-----+
| Pname |
+-----+
| Book |
+-----+
1 row in set (0.00 sec)

mysql> select * from S where Status >= 20;
+-----+-----+-----+-----+
| S# | Sname | Status | City |
+-----+-----+-----+-----+
| S1 | Vaishnavi | 20 | Nanded |
| S2 | Pallavi | 30 | Pune |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from S where City <> 'Pune';
+-----+-----+-----+-----+
| S# | Sname | Status | City |
+-----+-----+-----+-----+
| S1 | Vaishnavi | 20 | Nanded |
| S3 | Malhari | 10 | Mumbai |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select distinct City from S;
+-----+
| City |
+-----+
| Nanded |
| Pune |
| Mumbai |
+-----+
3 rows in set (0.00 sec)

mysql> select Pname, Weight as Grams, Weight * 1000 as Milligrams, Weight / 1000 as Kilograms from P;
```

```
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1 row in set (0.00 sec)

mysql> select * from S where Status >= 20;
+----+-----+-----+-----+
| S# | Sname | Status | City |
+----+-----+-----+-----+
| S1 | Vaishnavi | 20 | Nanded |
| S2 | Pallavi | 30 | Pune |
+----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from S where City <> 'Pune';
+----+-----+-----+-----+
| S# | Sname | Status | City |
+----+-----+-----+-----+
| S1 | Vaishnavi | 20 | Nanded |
| S3 | Malhari | 10 | Mumbai |
+----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select distinct City from S;
+-----+
| City |
+-----+
| Nanded |
| Pune |
| Mumbai |
+-----+
3 rows in set (0.00 sec)

mysql> select Pname, Weight as Grams, Weight * 1000 as Milligrams, Weight / 1000 as Kilograms from P;
+-----+-----+-----+-----+
| Pname | Grams | Milligrams | Kilograms |
+-----+-----+-----+-----+
| Pen | 5.2 | 5199.999809265137 | 0.005199999809265137 |
| Pensil | 8.1 | 8100.000381469727 | 0.008100000381469727 |
| Book | 12.3 | 12300.000190734863 | 0.012300000190734864 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> |
```