

MySQL Exercise (done by Soorya J)

CREATING A DB named '**exercise**' for this exercise.

```
MySQL Shell
MySQL localhost:33060+ ssl SQL >
MySQL localhost:33060+ ssl SQL >
MySQL localhost:33060+ ssl SQL > SHOW databases;
+-----+
| Database |
+-----+
| hondacars |
| information_schema |
| mysql |
| performance_schema |
| school |
| sys |
+-----+
6 rows in set (0.0016 sec)
MySQL localhost:33060+ ssl SQL > CREATE DATABASE exercise;
Query OK, 1 row affected (0.0623 sec)
MySQL localhost:33060+ ssl SQL > SHOW databases;
+-----+
| Database |
+-----+
| exercise |
| hondacars |
| information_schema |
| mysql |
| performance_schema |
| school |
| sys |
+-----+
7 rows in set (0.0034 sec)
MySQL localhost:33060+ ssl SQL > USE exercise;
Default schema set to `exercise`.
Fetching table and column names from `exercise` for auto-completion... Press ^C to stop.
MySQL localhost:33060+ ssl exercise SQL > _
```

1. Write a SQL statement to insert a record with your own value into the table **countries** against each column.

Here in the following is the structure of the table countries.

Field	Type	Null	Key	Default	Extra
COUNTRY_ID	varchar(2)	YES		NULL	
COUNTRY_NAME	varchar(40)	YES		NULL	

| REGION_ID | decimal(10,0) | YES | | NULL |

ANSWER :

CREATING TABLE 'countries'

MySQL Shell

```
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > CREATE TABLE countries (
    -> COUNTRY_ID VARCHAR(2),
    -> COUNTRY_NAME VARCHAR(40),
    -> REGION_ID DECIMAL(10,0)
    -> );

Query OK, 0 rows affected (0.0845 sec)

MySQL localhost:33060+ ssl exercise SQL > SHOW TABLES;

+-----+
| Tables_in_exercise |
+-----+
| countries           |
+-----+
1 row in set (0.0015 sec)

MySQL localhost:33060+ ssl exercise SQL > DESC countries;

+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| COUNTRY_ID | varchar(2)    | YES  |     | NULL    |       |
| COUNTRY_NAME | varchar(40)   | YES  |     | NULL    |       |
| REGION_ID  | decimal(10,0) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0019 sec)

MySQL localhost:33060+ ssl exercise SQL >
```

INSERTING DATA into 'countries' table

```
MySQL Shell
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > INSERT INTO countries
      -> (country_id,country_name,region_id)
      -> VALUES
      -> ('IN','India',1234567890);
Query OK, 1 row affected (0.0079 sec)
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM countries;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| IN         | India        | 1234567890 |
+-----+-----+-----+
1 row in set (0.0324 sec)
MySQL localhost:33060+ ssl exercise SQL > INSERT INTO countries
      -> (country_id,country_name,region_id)
      -> VALUES
      -> ('US','The United States',2345678901),
      -> ('CA','Canada', 3456789012);
Query OK, 2 rows affected (0.0363 sec)
Records: 2 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM countries;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| IN         | India        | 1234567890 |
| US         | The United States | 2345678901 |
| CA         | Canada       | 3456789012 |
+-----+-----+-----+
3 rows in set (0.0006 sec)
MySQL localhost:33060+ ssl exercise SQL >
```

2. Write a SQL statement to create a table **countriesdet** including columns **country_id**, **country_name** and **region_id** and make sure that the column **country_id** will be unique and store an auto incremented value.

ANSWER:

CREATING TABLE 'countriesdet'.

I made the 'country_id' column as the primary key so that it will be always unique.

```
Select MySQL Shell
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > SHOW TABLES;
+-----+
| Tables_in_exercise |
+-----+
| countries           |
+-----+
1 row in set (0.0387 sec)
MySQL localhost:33060+ ssl exercise SQL > CREATE TABLE countriesdet (
    -> COUNTRY_ID INT AUTO_INCREMENT,
    -> COUNTRY_NAME VARCHAR(40),
    -> REGION_ID DECIMAL(10,0)
    -> , PRIMARY KEY (COUNTRY_ID)
    -> );
Query OK, 0 rows affected (0.0518 sec)
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > SHOW TABLES;
+-----+
| Tables_in_exercise |
+-----+
| countries           |
| countriesdet        |
+-----+
2 rows in set (0.0393 sec)
MySQL localhost:33060+ ssl exercise SQL > DESC countriesdet;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| COUNTRY_ID | int           | NO   | PRI | NULL    | auto_increment |
| COUNTRY_NAME | varchar(40)   | YES  |     | NULL    |                |
| REGION_ID   | decimal(10,0) | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0388 sec)
MySQL localhost:33060+ ssl exercise SQL >
```

INSERTING DATA INTO 'countriesdet' table.

NOTE the error message while inserting a duplicate entry for the country_id (primary key).

```
MySQL Shell
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM countriesdet;
Empty set (0.0350 sec)
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > INSERT INTO countriesdet
-> (country_name,region_id)
-> VALUES
-> ('India',1234567890),
-> ('USA',2345678901),
-> ('Canada',3456789012),
-> ('Russia',4567890123);
Query OK, 4 rows affected (0.0393 sec)
Records: 4 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM countriesdet;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| 1 | India | 1234567890 |
| 2 | USA | 2345678901 |
| 3 | Canada | 3456789012 |
| 4 | Russia | 4567890123 |
+-----+-----+-----+
4 rows in set (0.0320 sec)
MySQL localhost:33060+ ssl exercise SQL > INSERT INTO countriesdet
-> (country_id,country_name,region_id)
-> VALUES
-> (1,'Finland',1234567895);
ERROR: 1062: Duplicate entry '1' for key 'countriesdet.PRIMARY'
MySQL localhost:33060+ ssl exercise SQL >
```

3. Write a SQL statement to rename the table **countriesdet** to **country_new**.

ANSWER:

Table 'countriesdet' renamed to 'country_new'.

```
MySQL Shell
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > SHOW TABLES;
+-----+
| Tables_in_exercise |
+-----+
| countries           |
| countriesdet        |
+-----+
2 rows in set (0.0013 sec)
MySQL localhost:33060+ ssl exercise SQL > RENAME TABLE countriesdet TO country_new;
Query OK, 0 rows affected (0.0712 sec)
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > SHOW TABLES;
+-----+
| Tables_in_exercise |
+-----+
| countries           |
| country_new         |
+-----+
2 rows in set (0.0015 sec)
MySQL localhost:33060+ ssl exercise SQL >
```

4. Write a mysql statement to retrieve name beginning with 'm' from the below **student** table

ANSWER:

CREATING TABLE 'student'

```
MySQL Shell
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > CREATE TABLE student (
    -> id INT AUTO_INCREMENT,
    -> name VARCHAR(30) NOT NULL,
    -> department VARCHAR(2) NOT NULL,
    -> birth DATE NOT NULL,
    -> PRIMARY KEY(id)
    -> );
Query OK, 0 rows affected (0.0741 sec)
```

POPULATING 'student' table with given sample data.

```
MySQL Shell
MySQL localhost:33060+ ssl exercise SQL > INSERT INTO student
    -> (name,department,birth)
    -> VALUES
    -> ('Maria Gloria','CS','1994-03-12'),
    -> ('John Smith','IT','1993-02-07'),
    -> ('Gal Rao','CS','1992-09-11'),
    -> ('Jakey Smith','EC','1990-08-31'),
    -> ('Rama Saho','IT','1994-12-09'),
    -> ('Maria Gaga','EC','1993-10-09');
Query OK, 6 rows affected (0.0481 sec)

Records: 6  Duplicates: 0  Warnings: 0
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM student;
+----+-----+-----+-----+
| id | name       | department | birth       |
+----+-----+-----+-----+
| 1  | Maria Gloria | CS        | 1994-03-12 |
| 2  | John Smith  | IT        | 1993-02-07 |
| 3  | Gal Rao     | CS        | 1992-09-11 |
| 4  | Jakey Smith | EC        | 1990-08-31 |
| 5  | Rama Saho   | IT        | 1994-12-09 |
| 6  | Maria Gaga  | EC        | 1993-10-09 |
+----+-----+-----+-----+
6 rows in set (0.0008 sec)
MySQL localhost:33060+ ssl exercise SQL >
```

QUERYING for names starting with 'm'.

I used LIKE operator with a regular expression. By default LIKE operator performs case-insensitive search.

```
MySQL Shell
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM student;
+-----+-----+-----+-----+
| id | name       | department | birth      |
+-----+-----+-----+-----+
| 1 | Maria Gloria | CS         | 1994-03-12 |
| 2 | John Smith  | IT         | 1993-02-07 |
| 3 | Gal Rao     | CS         | 1992-09-11 |
| 4 | Jakey Smith | EC         | 1990-08-31 |
| 5 | Rama Saho   | IT         | 1994-12-09 |
| 6 | Maria Gaga  | EC         | 1993-10-09 |
+-----+-----+-----+-----+
6 rows in set (0.0008 sec)
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > SELECT name FROM student WHERE name LIKE 'm%';
+-----+
| name       |
+-----+
| Maria Gloria |
| Maria Gaga  |
+-----+
2 rows in set (0.0009 sec)
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM student WHERE name LIKE 'm%';
+-----+-----+-----+-----+
| id | name       | department | birth      |
+-----+-----+-----+-----+
| 1 | Maria Gloria | CS         | 1994-03-12 |
| 6 | Maria Gaga  | EC         | 1993-10-09 |
+-----+-----+-----+-----+
2 rows in set (0.0007 sec)
MySQL localhost:33060+ ssl exercise SQL >
```


5. Write a select statement to display first 5 highly paid employees from the below **empsalary** table

ANSWER :

CREATING AND POPULATING table 'empsalary'.

```
MySQL Shell
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > CREATE TABLE empsalary (
    -> id INT AUTO_INCREMENT,
    -> ename VARCHAR(30) NOT NULL,
    -> salary DECIMAL(10,0) NOT NULL,
    -> PRIMARY KEY(id)
    -> );
Query OK, 0 rows affected (0.0737 sec)
MySQL localhost:33060+ ssl exercise SQL >
MySQL localhost:33060+ ssl exercise SQL > INSERT INTO empsalary
    -> (ename,salary)
    -> VALUES
    -> ('Smith',30000),
    -> ('Joney',20000),
    -> ('Mariya',40000),
    -> ('Zoya',35000),
    -> ('Lorya',25000),
    -> ('Rosy',75000),
    -> ('Aditya',40000),
    -> ('Kirti',34000),
    -> ('Joya',20500),
    -> ('Morya',40500);
Query OK, 10 rows affected (0.0431 sec)
Records: 10 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM empsalary;
+----+-----+-----+
| id | ename | salary |
+----+-----+-----+
| 1  | Smith | 30000  |
| 2  | Joney | 20000  |
| 3  | Mariya | 40000  |
| 4  | Zoya  | 35000  |
| 5  | Lorya  | 25000  |
| 6  | Rosy  | 75000  |
| 7  | Aditya | 40000  |
| 8  | Kirti  | 34000  |
| 9  | Joya  | 20500  |
| 10 | Morya  | 40500  |
+----+-----+-----+
10 rows in set (0.0007 sec)
MySQL localhost:33060+ ssl exercise SQL >
```

QUERYING FOR **FIRST 5 HIGHLY PAID** employees.

MySQL Shell

MySQL localhost:33060+ ssl exercise SQL >

MySQL localhost:33060+ ssl exercise SQL >

MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM empsalary;

id	ename	salary
1	Smith	30000
2	Joney	20000
3	Mariya	40000
4	Zoya	35000
5	Lorya	25000
6	Rosy	75000
7	Aditya	40000
8	Kirti	34000
9	Joya	20500
10	Morya	40500

10 rows in set (0.0007 sec)

MySQL localhost:33060+ ssl exercise SQL > SELECT * FROM empsalary ORDER BY salary DESC LIMIT 5;

id	ename	salary
6	Rosy	75000
10	Morya	40500
3	Mariya	40000
7	Aditya	40000
4	Zoya	35000

5 rows in set (0.0014 sec)

MySQL localhost:33060+ ssl exercise SQL >