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

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    |       |
+--------------+---------------+------+-----+---------+-------+
```

Query:

mysql> insert into tbl_country values (21, 'India', 123404);

Output:

Query OK, 1 row affected (0.00 sec)

Query:

mysql> insert into tbl_country values (26, 'China', 325241);

Output:

Query OK, 1 row affected (0.00 sec)

Query:

mysql> insert into tbl_country values (27, 'Brazil', 453271);

Output:

Query OK, 1 row affected (0.00 sec)

Query:

mysql> select * from tbl_country;

Output:

```
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
| 21         | India        |    123404 |
| 26         | China        |    325241 |
| 27         | Brazil       |    453271 |
+------------+--------------+-----------+
```

3 rows in set (0.00 sec)

2. Write a SQL statement to insert one row into the table countries against the column country_id and country_name.

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    |       |
+--------------+---------------+------+-----+---------+-------+
```

Query:

mysql> insert into tbl_country (country_id, country_name) values (23, 'Sri Lanka');

Output:

Query OK, 1 row affected (0.00 sec)

Query:

mysql> select * from tbl_country;

Output:

```
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
| 21         | India        |    123404 |
| 26         | China        |    325241 |
| 27         | Brazil       |    453271 |
| 23         | Sri Lanka    |      NULL |
+------------+--------------+-----------+
```

4 rows in set (0.00 sec)

3. Write a SQL statement to create a duplicate of countries table named country_new with all structure and data.

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    |       |
+--------------+---------------+------+-----+---------+-------+
```

Query:

mysql> create table tbl_country_new (country_id varchar(2), country_name varchar(40), region_id decimal(10,0));

Output:

Query OK, 0 rows affected (0.02 sec)

Query:

mysql> desc tbl_country_new;

Output:

```
+--------------+---------------+------+-----+---------+-------+
| 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 (0.00 sec)

4. Write a SQL statement to insert NULL values against region_id column for a row of countries table.

Query:

```
mysql> insert into tbl_country (country_id, country_name, region_id) values (23, 'Sri Lanka', null);
```

Output:

```
Query OK, 1 row affected (0.00 sec)
```

Query:

```
mysql> select * from tbl_country;
```

Output:

```
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
| 21         | India        |    123404 |
| 26         | China        |    325241 |
| 27         | Brazil       |    453271 |
| 23         | Sri Lanka    |      NULL |
+------------+--------------+-----------+
4 rows in set (0.00 sec)
```

5. Write a SQL statement to insert 3 rows by a single insert statement.

Query:

```
mysql> insert into tbl_country values (30, 'Bangladesh', 230328), (35, 'Russia', 298234), (40, 'Germany', 214830);
```

Output:

```
Query OK, 3 rows affected (0.00 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

Query:

```
mysql> select * from tbl_country;
```

Output:

```
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
| 21         | India        |    123404 |
| 26         | China        |    325241 |
| 27         | Brazil       |    453271 |
| 23         | Sri Lanka    |      NULL |
| 30         | Bangladesh   |    230328 |
| 35         | Russia       |    298234 |
| 40         | Germany      |    214830 |
+------------+--------------+-----------+
```

7 rows in set (0.00 sec)

6. Write a SQL statement insert rows from country_new table to countries table.

Here are the rows for the country_new table. Assume that the country's table is empty.

```
+------------+--------------+-----------+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+------------+--------------+-----------+
| C0001      | India        |      1001 |
| C0002      | USA          |      1007 |
| C0003      | UK           |      1003 |
+------------+--------------+-----------+
```

Query:

mysql> insert into tbl_country_new (country_id, country_name, region_id) values ('c0001', 'India', 1001), ('c0002', 'USA', 1007), ('c0003', 'UK', 1003);

Output:

Query OK, 3 rows affected (0.00 sec)
Records: 3 Duplicates: 0 Warnings: 0

Query:

mysql> select * from tbl_country_new;

Output:

```
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
| c0001      | India        |      1001 |
| c0002      | USA          |      1007 |
| c0003      | UK           |      1003 |
+------------+--------------+-----------+
```

3 rows in set (0.00 sec)

7. Write a SQL statement to insert one row in jobs table to ensure that no duplicate value will be entered in the job_id column.

Query:

mysql> select * from tbl_jobs;

Output:

```
+--------+-----------+------------+------------+
| job_id | job_title | min_salary | max_salary |
+--------+-----------+------------+------------+
|     11 | Engineer  |      20000 |      40000 |
|     15 | Teacher   |      10000 |      50000 |
+--------+-----------+------------+------------+
```

2 rows in set (0.00 sec)

Query:

mysql> insert into tbl_jobs values (11, 'Doctor', 50000, 80000);

Output:

ERROR 1062 (23000): Duplicate entry '11' for key 'tbl_jobs.PRIMARY'

8. Write a SQL statement to insert one row in jobs table to ensure that no duplicate value will be entered in the job_id column.

Query:

mysql> select * from tbl_jobs;

Output:

```
+--------+-----------+------------+------------+
| job_id | job_title | min_salary | max_salary |
+--------+-----------+------------+------------+
|     11 | Engineer  |      20000 |      40000 |
|     15 | Teacher   |      10000 |      50000 |
+--------+-----------+------------+------------+
```

2 rows in set (0.00 sec)

Query:

mysql> insert into tbl_jobs values (11, 'Doctor', 50000, 80000);

Output:

ERROR 1062 (23000): Duplicate entry '11' for key 'tbl_jobs.PRIMARY'

9. Write a SQL statement to insert a record into the table countries to ensure that a country_id and region_id combination will be entered once in the table.

Query:

mysql> insert into tbl_country_new (country_id, country_name, region_id) values ('c0001', 'SriLanka', 1001);

Output:

ERROR 1062 (23000): Duplicate entry 'c0001-1001' for key 'tbl_country_new.PRIMARY'

10. Write a SQL statement to insert rows into the table countries in which the value of the country_id column will be unique and auto incremented.

Query:

mysql> create table tbl_country_new (country_id int primary key auto_increment, country_name varchar(40), region_id decimal(10,0));

Output:

Query OK, 0 rows affected (0.02 sec)

Query:

mysql> insert into tbl_country_new values (11, 'India', 1001);

Output:
Query OK, 1 row affected (0.01 sec)

Query:
mysql> insert into tbl_country_new (country_name, region_id) values ('Japan', 1007);

Output:
Query OK, 1 row affected (0.00 sec)

Query:
mysql> select * from tbl_country_new;

Output:

```
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
|         11 | India        |      1001 |
|         12 | Japan        |      1007 |
+------------+--------------+-----------+
```

2 rows in set (0.00 sec)

11. Write a SQL statement to insert records into the table countries to ensure that the country_id column will not contain any duplicate data and this will be automatically incremented and the column country_name will be filled up by 'N/A' if no value assigned for that column.

Query:
mysql> create table tbl_country_new (country_id int primary key auto_increment, country_name varchar(40) default 'N/A', region_id decimal(10,0));

Output:
Query OK, 0 rows affected (0.01 sec)

Query:
mysql> insert into tbl_country_new values (11, 'India', 1001);

Output:
Query OK, 1 row affected (0.00 sec)

Query:
mysql> insert into tbl_country_new (region_id) values (1007);

Output:
Query OK, 1 row affected (0.01 sec)

Query:
mysql> select * from tbl_country_new;

Output:
```
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
|       11 | India      |     1001 |
|       12 | N/A        |     1007 |
+------------+--------------+-----------+
2 rows in set (0.00 sec)
```

12. Write a SQL statement to insert rows in the job_history table in which one column job_id is containing those values which exist in the job_id column of the jobs table.

Query:
mysql> select * from tbl_jobs;

Output:
```
+--------+-----------+------------+------------+
| job_id | job_title | min_salary | max_salary |
+--------+-----------+------------+------------+
|     11 | Engineer  |      20000 |      40000 |
|     15 | Teacher   |      10000 |      50000 |
+--------+-----------+------------+------------+
2 rows in set (0.00 sec)
```

Query:
mysql> create table tbl_history (empId int primary key, job_id int, dept_id int, foreign key (job_id) references tbl_jobs (job_id));

Output:
Query OK, 0 rows affected (0.01 sec)

Query:

```
mysql> insert into tbl_history values(101, 11, 60);
```

Output:

```
Query OK, 1 row affected (0.00 sec)
```

Query:

```
mysql> select * from tbl_history;
```

Output:

```
+-------+--------+---------+
| empId | job_id | dept_id |
+-------+--------+---------+
|   101 |     11 |      60 |
+-------+--------+---------+
1 row in set (0.00 sec)
```