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MYSQL

LAB ACTIVITY - 2

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	

```
mysql> desc tbl_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 (0.00 sec)

mysql> insert into tbl_countries values (101,'Pravins',1000);
ERROR 1406 (22001): Data too long for column 'country_id' at row 1
mysql> insert into tbl_countries values (10,'Pravins',1000);
Query OK, 1 row affected (0.01 sec)

mysql> insert into tbl_countries values (20,'Pravins',2000);
Query OK, 1 row affected (0.01 sec)

mysql> insert into tbl_countries values (30,'Pravins',30003);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_countries;
+-----+-----+-----+
| country_id | country_name | region_id |
+-----+-----+-----+
| 10         | Pravins      | 1000      |
| 20         | Pravins      | 2000      |
| 30         | Pravins      | 30003     |
+-----+-----+-----+
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    |       |
+-----+-----+-----+-----+-----+-----+
```

```
mysql> insert into tbl_countries (country_id,country_name) values ('C1','India');
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_countries;
+-----+-----+-----+
| country_id | country_name | region_id |
+-----+-----+-----+
| 10         | Pravins      | 1000      |
| 20         | Pravins      | 2000      |
| 30         | Pravins      | 3000      |
| C1         | India        | NULL      |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

3. Write a SQL statement to create 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    |      |
+-----+-----+-----+-----+-----+
```

```
mysql> create table if not exists country_new as select * from countries;
Query OK, 0 rows affected (0.04 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> show tables;
```

```
+-----+
| Tables_in_mysqlday4 |
+-----+

| country_new      |
| departments      |
| employees         |
| myview            |
| tbl_agents        |
| tbl_countries     |
| tbl_customers     |
| tbl_departments   |
| tbl_employee1     |
+-----+
10 rows in set (0.00 sec)
```

```
mysql> insert into country_new values (10,'Pravins',1000);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into country_new values (20,'Pravins',2000);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into country_new values (30,'Pravins',30003);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from country_new;
```

```
+-----+-----+-----+
| country_id | country_name | region_id |
+-----+-----+-----+
| 10         | Pravins      | 1000      |
| 20         | Pravins      | 2000      |
| 30         | Pravins      | 30003     |
| 1         | India        | NULL      |
+-----+-----+-----+
```

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

```
mysql> INSERT INTO countries (country_id,country_name,region_id) VALUES(5,'India',NULL);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> INSERT INTO countries (country_id,country_name,region_id) VALUES(10,'Pravins',NULL);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO countries (country_id,country_name,region_id) VALUES(20,'Pravins',NULL);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO countries (country_id,country_name,region_id) VALUES(30,'Pravins',NULL);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from countries;
```

country_id	country_name	region_id
5	India	NULL
10	Pravins	NULL
20	Pravins	NULL
30	Pravins	NULL

4 rows in set (0.00 sec)

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

```
mysql> insert into countries values (40,'Pravins',100),(50,'Pravins',200),(41,'Pravins',300);
Query OK, 3 rows affected (0.00 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

```
mysql> select * from countries;
```

country_id	country_name	region_id
5	India	NULL
10	Pravins	NULL
20	Pravins	NULL
30	Pravins	NULL
40	Pravins	100
41	Pravins	300
50	Pravins	200

7 rows in set (0.00 sec)

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

Here is the rows for country_new table. Assume that, the countries table is empty.

COUNTRY_ID	COUNTRY_NAME	REGION_ID
C0001	India	1001
C0002	USA	1007
C0003	UK	1003

```
mysql> create table tbl_country_new (  
  -> country_id varchar(5) NULL,  
  -> country_name varchar(40) NULL,  
  -> region_id decimal(10,0) Null  
  -> );  
Query OK, 0 rows affected (0.02 sec)  
  
mysql> select * from tbl_country_new;  
Empty set (0.00 sec)  
  
mysql> insert into tbl_country_new values ('C0001','India',1001);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> insert into tbl_country_new values ('C0002','USA',1007);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> insert into tbl_country_new values ('C0003','UK',1003);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> select * from tbl_country_new;  
+-----+-----+-----+  
| country_id | country_name | region_id |  
+-----+-----+-----+  
| C0001      | India        | 1001      |  
| C0002      | USA          | 1007      |  
| C0003      | UK           | 1003      |  
+-----+-----+-----+  
3 rows in set (0.00 sec)
```

```
mysql> create table tbl_countriase (  
  -> country_id varchar(5) NULL,  
  -> country_name varchar(40) NULL,  
  -> region_id decimal(10,0) Null  
  -> );  
Query OK, 0 rows affected (0.02 sec)  
  
mysql> select * from tbl_countriase;  
Empty set (0.00 sec)
```

```
mysql> insert into tbl_countriess (country_id,country_name,region_id) select country_id,country_name,region_id from tbl_country_new;
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> select * from tbl_countriess;
+-----+-----+-----+
| 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.

```
mysql> CREATE TABLE tbl_jobs (
  -> JOB_ID integer NOT NULL UNIQUE PRIMARY KEY,
  -> JOB_TITLE varchar(35) NOT NULL,
  -> MIN_SALARY decimal(6,0)
  -> );
Query OK, 0 rows affected (0.03 sec)

mysql> insert into tbl_jobs values(101,'JAVA',10000);
Query OK, 1 row affected (0.01 sec)

mysql> select * from tbl_jobs;
+-----+-----+-----+
| JOB_ID | JOB_TITLE | MIN_SALARY |
+-----+-----+-----+
| 101    | JAVA      | 10000      |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> insert into tbl_jobs values(101,'Javas',30000);
ERROR 1062 (23000): Duplicate entry '101' 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.

```
mysql> CREATE TABLE tbl_jobs (
  -> JOB_ID integer NOT NULL UNIQUE PRIMARY KEY,
  -> JOB_TITLE varchar(35) NOT NULL,
  -> MIN_SALARY decimal(6,0)
  -> );
Query OK, 0 rows affected (0.03 sec)

mysql> insert into tbl_jobs values(101,'JAVA',10000);
Query OK, 1 row affected (0.01 sec)

mysql> select * from tbl_jobs;
+-----+-----+-----+
| JOB_ID | JOB_TITLE | MIN_SALARY |
+-----+-----+-----+
| 101 | JAVA | 10000 |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> insert into tbl_jobs values(101,'Javas',30000);
ERROR 1062 (23000): Duplicate entry '101' 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.

```
mysql> CREATE TABLE IF NOT EXISTS tbl_countriesa (
  -> COUNTRY_ID integer NOT NULL,
  -> COUNTRY_NAME varchar(40) NOT NULL,
  -> REGION_ID integer NOT NULL,
  -> PRIMARY KEY (COUNTRY_ID,REGION_ID)
  -> );
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> insert into tbl_countriesa values (101,'India',109);
Query OK, 1 row affected (0.01 sec)

mysql> select * from tbl_countriesa;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| 101 | India | 109 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> insert into tbl_countriesa values ( 101 , 'Italys',109);
ERROR 1062 (23000): Duplicate entry '101-109' for key 'tbl_countriesa.PRIMARY'
```


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

```
mysql> CREATE TABLE IF NOT EXISTS countriesz (  
-> COUNTRY_ID integer NOT NULL AUTO_INCREMENT PRIMARY KEY,  
-> COUNTRY_NAME varchar(40) NOT NULL,  
-> REGION_ID integer NOT NULL  
-> );
```

Query OK, 0 rows affected (0.02 sec)

```
mysql> desc countriesz;
```

Field	Type	Null	Key	Default	Extra
COUNTRY_ID	int	NO	PRI	NULL	auto_increment
COUNTRY_NAME	varchar(40)	NO		NULL	
REGION_ID	int	NO		NULL	

3 rows in set (0.00 sec)

```
mysql> show tables;
```

Tables_in_mysql	day4
countries	
countriesz	
country_new	
departments	
employees	
myview	
tbl_agents	
tbl_countries	
tbl_countriesa	
tbl_countriess	
tbl_country_new	
tbl_customers	
tbl_departments	
tbl_employee1	
tbl_jobs	

```
mysql> insert into countriesz (country_name,region_id) values ('Surya',185);  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from countriesz;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| 1 | Surya | 185 |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> insert into countriesz (country_name,region_id) values ('PHONES',195);
Query OK, 1 row affected (0.00 sec)

mysql> select * from countriesz;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| 1 | Surya | 185 |
| 2 | PHONES | 195 |
+-----+-----+-----+
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.

```
mysql> CREATE TABLE IF NOT EXISTS country (
  -> COUNTRY_ID integer NOT NULL AUTO_INCREMENT PRIMARY KEY,
  -> COUNTRY_NAME varchar(40) NOT NULL DEFAULT 'N/A',
  -> REGION_ID integer NOT NULL
  -> );
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> insert into country values(101,'Surya',100);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from country;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| 101 | Surya | 100 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> desc country;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| COUNTRY_ID | int | NO | PRI | NULL | auto_increment |
| COUNTRY_NAME | varchar(40) | NO | | N/A | |
| REGION_ID | int | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> insert into country (region_id) values (109);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from country;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| 101 | Surya | 100 |
| 102 | N/A | 109 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> insert into country (country_name,region_id) values ('huj',103);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from country;
+-----+-----+-----+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+-----+-----+-----+
| 101 | Surya | 100 |
| 102 | N/A | 109 |
| 103 | huj | 103 |
+-----+-----+-----+
3 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 are exists in job_id column of jobs table.

```
mysql> CREATE TABLE IF NOT EXISTS jobs (
  -> JOB_ID integer NOT NULL UNIQUE PRIMARY KEY,
  -> JOB_TITLE varchar(35) NOT NULL DEFAULT ' ',
  -> MIN_SALARY decimal(6,0) DEFAULT 8000,
  -> MAX_SALARY decimal(6,0) DEFAULT 20000
  -> )ENGINE=InnoDB;
Query OK, 0 rows affected (0.03 sec)

mysql> insert into jobs(job_id,job_title) values (101111,'Google');
Query OK, 1 row affected (0.01 sec)

mysql> insert into jobs(job_id,job_title) values (102113,'Yahoo');
Query OK, 1 row affected (0.00 sec)

mysql> select * from jobs;
+-----+-----+-----+-----+
| JOB_ID | JOB_TITLE | MIN_SALARY | MAX_SALARY |
+-----+-----+-----+-----+
| 101111 | Google   | 8000       | 20000      |
| 102113 | Yahoo    | 8000       | 20000      |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> CREATE TABLE job_history (
  -> EMPLOYEE_ID integer NOT NULL PRIMARY KEY,
  -> JOB_ID integer NOT NULL,
  -> DEPARTMENT_ID integer DEFAULT NULL,
  -> FOREIGN KEY (job_id) REFERENCES jobs(job_id)
  -> )ENGINE=InnoDB;
Query OK, 0 rows affected (0.02 sec)

mysql> insert into job_history values (501,101111,50);
Query OK, 1 row affected (0.01 sec)

mysql> select * from job_history;
+-----+-----+-----+
| EMPLOYEE_ID | JOB_ID | DEPARTMENT_ID |
+-----+-----+-----+
| 501         | 101111 | 50             |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> insert into job_history values (500,101114,59);)
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails ('mysql:day4`.`job_history', CONSTRAINT `job_history_ibfk_1` FOREIGN KEY (`JOB_ID`) REFERENCES `jobs` (`JOB_ID`))
```

13. Write a SQL statement to insert rows into the table employees in which a set of columns department_id and manager_id contains a unique value and that combined values must have exists into the table departments.

```
mysql> CREATE TABLE IF NOT EXISTS departments (
-> DEPARTMENT_ID integer NOT NULL UNIQUE,
-> DEPARTMENT_NAME varchar(30) NOT NULL,
-> MANAGER_ID integer NOT NULL,
-> LOCATION_ID integer DEFAULT NULL,
-> PRIMARY KEY (DEPARTMENT_ID,MANAGER_ID)
-> )ENGINE=InnoDB;
Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO departments VALUES(60,'SALES',201,89);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO departments VALUES(61,'ACCOUNTS',201,89);
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO departments VALUES(80,'FINANCE',211,90);
Query OK, 1 row affected (0.00 sec)

mysql> select * from departments;
+-----+-----+-----+-----+
| DEPARTMENT_ID | DEPARTMENT_NAME | MANAGER_ID | LOCATION_ID |
+-----+-----+-----+-----+
|          60   | SALES           |         201 |          89 |
|          61   | ACCOUNTS        |         201 |          89 |
|          80   | FINANCE         |         211 |          90 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> CREATE TABLE IF NOT EXISTS employees (
-> EMPLOYEE_ID integer NOT NULL PRIMARY KEY,
-> FIRST_NAME varchar(20) DEFAULT NULL,
-> LAST_NAME varchar(25) NOT NULL,
-> JOB_ID varchar(10) NOT NULL,
-> SALARY decimal(8,2) DEFAULT NULL,
-> MANAGER_ID integer DEFAULT NULL,
-> DEPARTMENT_ID integer DEFAULT NULL,
-> FOREIGN KEY(DEPARTMENT_ID,MANAGER_ID)
-> REFERENCES departments(DEPARTMENT_ID,MANAGER_ID)
-> )ENGINE=InnoDB;
Query OK, 0 rows affected, 1 warning (0.01 sec)
```

```
mysql> INSERT INTO employees VALUES(510,'Alex','Hanes','CLERK',18000,201,60);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employees VALUES(511,'Kim','Leon','CLERK',18000,211,80);
Query OK, 1 row affected (0.00 sec)

mysql> select * from employees;
+-----+-----+-----+-----+-----+-----+-----+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | JOB_ID | SALARY | MANAGER_ID | DEPARTMENT_ID |
+-----+-----+-----+-----+-----+-----+-----+
|          510 | Alex      | Hanes    | CLERK | 18000.00 |         201 |          60   |
|          511 | Kim       | Leon     | CLERK | 18000.00 |         211 |          80   |
+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> INSERT INTO employees VALUES (555,'LIS','SALE','LAKERS',18000,321,60);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`aaa`.`employees`, CONSTRAINT `employees_ibfk_1` FOREIGN KEY (`DEPARTMENT_ID`, `MANAGER_ID`) REFERENCES `departments` (`DEPARTMENT_ID`, `MANAGER_ID`))
```

14. Write a SQL statement to insert rows into the table employees in which a set of columns department_id and job_id contains the values which must have exists into the table departments and jobs.

```
mysql> create table departments (
  -> department_id integer NOT NULL UNIQUE,
  -> department_name varchar(30) NOT NULL,
  -> manager_id integer default null,
  -> location_id integer default NULL,
  -> primary key (department_id))
  -> engine=InnoDB;
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> insert into departments values (10,'Sales',101,100);
Query OK, 1 row affected (0.01 sec)

mysql> insert into departments values (50,'SaleManagers',102,103);
Query OK, 1 row affected (0.01 sec)

mysql> select * from departments;
+-----+-----+-----+-----+
| department_id | department_name | manager_id | location_id |
+-----+-----+-----+-----+
| 10 | Sales | 101 | 100 |
| 50 | SaleManagers | 102 | 103 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> CREATE TABLE IF NOT EXISTS jobs (
  -> JOB_ID integer NOT NULL UNIQUE PRIMARY KEY,
  -> JOB_TITLE varchar(35) NOT NULL DEFAULT ' ',
  -> MIN_SALARY decimal(6,0) DEFAULT 8000,
  -> MAX_SALARY decimal(6,0) DEFAULT 20000
  -> )ENGINE=InnoDB;
Query OK, 0 rows affected, 1 warning (0.01 sec)

mysql> insert into jobs(job_id,job_title) values (1001,'Sales');
Query OK, 1 row affected (0.01 sec)

mysql> insert into jobs(job_id,job_title) values (10041,'Saliesa');
Query OK, 1 row affected (0.00 sec)

mysql> select * from jobs;
+-----+-----+-----+-----+
| job_id | job_title | min_salary | max_salary |
+-----+-----+-----+-----+
| 1001 | Sales | NULL | NULL |
| 10041 | Saliesa | NULL | NULL |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> CREATE TABLE IF NOT EXISTS tbl_employees (
-> EMPLOYEE_ID integer NOT NULL PRIMARY KEY,
-> FIRST_NAME varchar(20) DEFAULT NULL,
-> LAST_NAME varchar(25) NOT NULL,
-> DEPARTMENT_ID integer DEFAULT NULL,
-> FOREIGN KEY(DEPARTMENT_ID)
-> REFERENCES departments(DEPARTMENT_ID),
-> JOB_ID integer NOT NULL,
-> FOREIGN KEY(JOB_ID)
-> REFERENCES jobs(JOB_ID),
-> SALARY decimal(8,2) DEFAULT NULL
-> )ENGINE=InnoDB;
Query OK, 0 rows affected (0.03 sec)

mysql> insert into tbl_employees values (1000,'Surya','Mohans',108,1000,18000);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`s`.`tbl_employees`, CONSTRAINT `tbl_employees_ibfk_1` FOREIGN KEY (`DEPARTMENT_ID`) REFERENCES `departments` (`department_id`))
mysql> desc tbl_employees;
```

Field	Type	Null	Key	Default	Extra
EMPLOYEE_ID	int	NO	PRI	NULL	
FIRST_NAME	varchar(20)	YES		NULL	
LAST_NAME	varchar(25)	NO		NULL	
DEPARTMENT_ID	int	YES	MUL	NULL	
JOB_ID	int	NO	MUL	NULL	
SALARY	decimal(8,2)	YES		NULL	

```
6 rows in set (0.00 sec)
```