MySQL Assignment -1 (DDL)

1. Login to MySQL and view all databases already present. You should get following result :

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| email_subscriptions |
| fb21june24         |
| fbs_practice       |
| information_schema |
| mysql              |
| performance_schema |
| practice           |
| restaurantanalysis |
| sms21june24        |
| sms22june24        |
| sms_22june24       |
| ss20june24         |
| sys                |
+--------------------+
```

2. Write an SQL statement to create a simple table countries including columns country_id,country_name and region_id. After this display the structure of table as below :

```
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| country_id   | int(11)     | YES  |     | NULL    |       |
| country_name | varchar(20) | YES  |     | NULL    |       |
| region_id    | int(11)     | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
```

```
mysql> create table countries(
    -> country_id int,
    -> country_name varchar(20),
    -> regin_id int);
Query OK, 0 rows affected (0.12 sec)

mysql> describe countries;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| country_id   | int         | YES  |     | NULL    |       |
| country_name | varchar(20) | YES  |     | NULL    |       |
| regin_id     | int         | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
3 rows in set (0.07 sec)
```

3.   Write an SQL statement to create a table named jobs including columns job_id, job_title, min_salary, max_salary and check whether the max_salary amount exceeding the upper limit 25000. Also set job_id as primary key and entering null values for job_title is not allowed.

```
mysql> create table jobs(
    -> job_id int primary key,
    -> job_title varchar(20) not null,
    -> min_salary decimal(7,2),
    -> max_salary decimal(7,2) check(max_salary>=25000))
    -> ;
Query OK, 0 rows affected (0.15 sec)
```

4.   Write a SQL statement to create a table named job_histry including columns employee_id, start_date, end_date, job_id and department_id

```
mysql> create table job_histry(
    -> employee_id int,
    -> start_date varchar(20),
    -> end_date varchar(20),
    -> job_id int,
    -> department_id int);
Query OK, 0 rows affected (0.15 sec)
```

5.   Write an SQL statement to alter a table named countries to make sure that no duplicate data against column country_id will be allowed at the time of insertion.

mysql> alter table countries
        -> modify column country_id int unique;

6. Write an SQL statement to create a table named jobs including columns job_id, job_title, min_salary and max_salary, and make sure that, the default value for job_title is blank and min_salary is 8000 and max_salary is NULL will be entered automatically at the time of insertion if no value assigned for the specified columns.

     mysql> create table jobs(
        -> job_id int,
        -> job_title varchar(50) default '',
        -> min_salary int default 8000,
        -> max_salary int default null
        ->);

7. Create a Department table with following structure

```
+------------------+----------------+------+-----+---------+-------+
| Field            | Type           | Null | Key | Default | Extra |
+------------------+----------------+------+-----+---------+-------+
| DEPARTMENT_ID    | decimal(4,0)   | NO   | PRI | 0       |       |
| DEPARTMENT_NAME  | varchar(30)    | NO   |     | NULL    |       |
| MANAGER_ID       | decimal(6,0)   | NO   | PRI | 0       |       |
| LOCATION_ID      | decimal(4,0)   | YES  |     | NULL    |       |
+------------------+----------------+------+-----+---------+-------+
```

     mysql> create table department(
        -> DEPARTMENT_ID decimal(4,0) not null default 0,
        -> DEPARTMENT_NAME varchar(30) not null,
        -> MANAGER_ID decimal(6,0) not null default 0,
        -> LOCATION_ID decimal(4,0),
        -> primary key(DEPARTMENT_ID,MANAGER_ID));

8. Write an SQL statement to create a table employees including columns employee_id, first_name, last_name, email, phone_number hire_date, job_id, salary, commission, manager_id and department_id and make sure that, the employee_id column does not contain any duplicate value at the time of insertion and the foreign key columns combined by department_id and manager_id columns contain only those unique combination values, which combinations are exists in the departments table.

```
mysql> create table employees(
    -> employee_id int primary key,
    -> first_name varchar(30),
    -> last_name varchar(30),
    -> email varchar(50),
    -> phone_number varchar(20),
    -> hire_date date,
    -> job_id int,
    -> salary decimal(8,2),
    -> commission decimal(5,2),
    -> manager_id decimal(6,0),
    -> department_id decimal(4,0),
    -> foreign key(department_id, manager_id)
    -> references department(department_id, manager_id)
    -> );
```