1.Create Table

A .Write a 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.
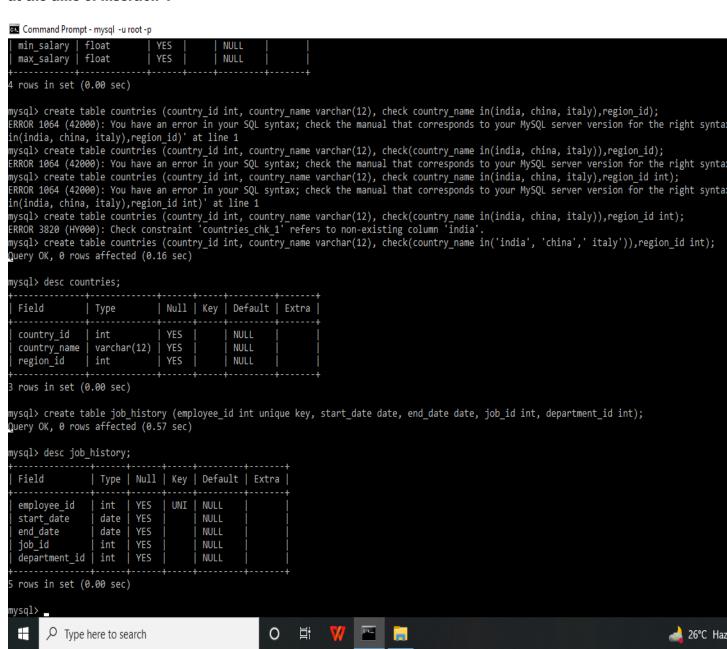


```
Command Prompt - mysql -u root -p
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 21
Server version: 8.0.31 MySQL Community Server - GPL

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owners.

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| employee_job       |
| empoloye           |
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
6 rows in set (0.00 sec)

mysql> use employee_job;
Database changed
mysql> create table jobs (job_id int, job_title varchar(20),min_salary float,max_salary float,check(max_salary<=2500));
ERROR 1050 (42S01): Table 'jobs' already exists
mysql> create table job (job_id int, job_title varchar(20),min_salary float,max_salary float,check(max_salary<=2500));
Query OK, 0 rows affected (0.17 sec)

mysql> desc job;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| job_id     | int         | YES  |     | NULL    |       |
| job_title  | varchar(20) | YES  |     | NULL    |       |
| min_salary | float       | YES  |     | NULL    |       |
| max_salary | float       | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

b. Write a SQL statement to create a table named countries including columns country_id, country_name and region_id and make sure that no countries except Italy, India and China will be entered in the table.

c. Write a SQL statement to create a table job_history including columns employee_id, start_date, end_date,
job_id and department_id and make sure that, the employee_id column does not contain any duplicate value
at the time of insertion .

```
Command Prompt - mysql -u root -p

| min_salary | float       | YES |   | NULL |   |   |
| max_salary | float       | YES |   | NULL |   |   |
+------------+-------------+-----+---+------+---+---+
4 rows in set (0.00 sec)

mysql> create table countries (country_id int, country_name varchar(12), check country_name in(india, china, italy),region_id);
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
in(india, china, italy),region_id)' at line 1
mysql> create table countries (country_id int, country_name varchar(12), check(country_name in(india, china, italy)),region_id);
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
mysql> create table countries (country_id int, country_name varchar(12), check country_name in(india, china, italy),region_id int);
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
in(india, china, italy),region_id int)' at line 1
mysql> create table countries (country_id int, country_name varchar(12), check(country_name in(india, china, italy)),region_id int);
ERROR 3820 (HY000): Check constraint 'countries_chk_1' refers to non-existing column 'india'.
mysql> create table countries (country_id int, country_name varchar(12), check(country_name in('india', 'china',' italy')),region_id int);
Query OK, 0 rows affected (0.16 sec)

mysql> desc countries;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| country_id   | int         | YES  |     | NULL    |       |
| country_name | varchar(12) | YES  |     | NULL    |       |
| region_id    | int         | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> create table job_history (employee_id int unique key, start_date date, end_date date, job_id int, department_id int);
Query OK, 0 rows affected (0.57 sec)

mysql> desc job_history;
+---------------+------+------+-----+---------+-------+
| Field         | Type | Null | Key | Default | Extra |
+---------------+------+------+-----+---------+-------+
| employee_id   | int  | YES  | UNI | NULL    |       |
| start_date    | date | YES  |     | NULL    |       |
| end_date      | date | YES  |     | NULL    |       |
| job_id        | int  | YES  |     | NULL    |       |
| department_id | int  | YES  |     | NULL    |       |
+---------------+------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql>
```

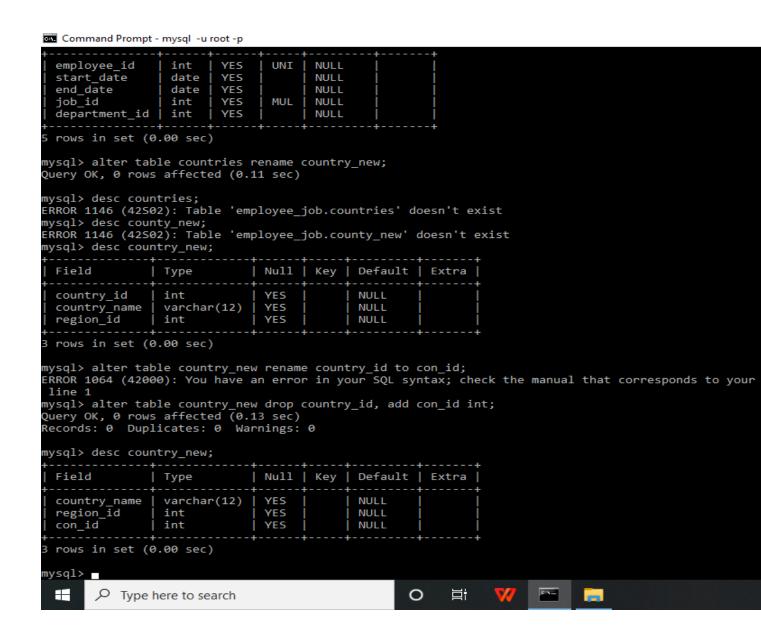Type here to search   O   〓   W   〓   26°C Haz

2.Alter Table

a.Write a SQL statement to add a foreign key constraint named fk_job_id on job_id column of job_history table referencing to the primary key job_id of jobs table.

```
+----------------+------+------+-----+---------+-------+
| employee_id    | int  | YES  | UNI | NULL    |       |
| start_date     | date | YES  |     | NULL    |       |
| end_date       | date | YES  |     | NULL    |       |
| job_id         | int  | YES  |     | NULL    |       |
| department_id  | int  | YES  |     | NULL    |       |
+----------------+------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql> alter table job_history;
Query OK, 0 rows affected (0.01 sec)

mysql> add constraint fk_job_id;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the rig
t fk_job_id' at line 1
mysql> alter table job_history(add constraint fk_job_id);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the rig
nt fk_job_id)' at line 1
mysql> alter table job_history add constraint fk_job foreign key(job_id) referencesjobs(job_id);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the rig
s(job_id)' at line 1
mysql> alter table job_history add constraint fk_job foreign key(job_id) references jobs(job_id);
ERROR 1822 (HY000): Failed to add the foreign key constraint. Missing index for constraint 'fk_job' in the referenced table 'jobs'
mysql> alter table jobs add constraint pk_jobs primary key(job_id);
Query OK, 0 rows affected (0.26 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> alter table job_history add constraint fk_job foreign key(job_id) references jobs(job_id);
Query OK, 0 rows affected (0.44 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc job_history;
+----------------+------+------+-----+---------+-------+
| Field          | Type | Null | Key | Default | Extra |
+----------------+------+------+-----+---------+-------+
| employee_id    | int  | YES  | UNI | NULL    |       |
| start_date     | date | YES  |     | NULL    |       |
| end_date       | date | YES  |     | NULL    |       |
| job_id         | int  | YES  | MUL | NULL    |       |
| department_id  | int  | YES  |     | NULL    |       |
+----------------+------+------+-----+---------+-------+
5 rows in set (0.00 sec)

mysql>
```

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b.**Write a SQL statement to rename the table countries to country_new.**

c.**Write a SQL statement to change the name of the column country_id to con_id, keeping the data type and size same.**

```
+--------------+-------+-------+-------+---------+-------+
| employee_id  | int   | YES   | UNI   | NULL    |       |
| start_date   | date  | YES   |       | NULL    |       |
| end_date     | date  | YES   |       | NULL    |       |
| job_id       | int   | YES   | MUL   | NULL    |       |
| department_id| int   | YES   |       | NULL    |       |
+--------------+-------+-------+-------+---------+-------+
5 rows in set (0.00 sec)

mysql> alter table countries rename country_new;
Query OK, 0 rows affected (0.11 sec)

mysql> desc countries;
ERROR 1146 (42S02): Table 'employee_job.countries' doesn't exist
mysql> desc county_new;
ERROR 1146 (42S02): Table 'employee_job.county_new' doesn't exist
mysql> desc country_new;
+--------------+-------------+-------+-------+---------+-------+
| Field        | Type        | Null  | Key   | Default | Extra |
+--------------+-------------+-------+-------+---------+-------+
| country_id   | int         | YES   |       | NULL    |       |
| country_name | varchar(12) | YES   |       | NULL    |       |
| region_id    | int         | YES   |       | NULL    |       |
+--------------+-------------+-------+-------+---------+-------+
3 rows in set (0.00 sec)

mysql> alter table country_new rename country_id to con_id;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your
 line 1
mysql> alter table country_new drop country_id, add con_id int;
Query OK, 0 rows affected (0.13 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc country_new;
+--------------+-------------+-------+-------+---------+-------+
| Field        | Type        | Null  | Key   | Default | Extra |
+--------------+-------------+-------+-------+---------+-------+
| country_name | varchar(12) | YES   |       | NULL    |       |
| region_id    | int         | YES   |       | NULL    |       |
| con_id       | int         | YES   |       | NULL    |       |
+--------------+-------------+-------+-------+---------+-------+
3 rows in set (0.00 sec)

mysql>
```

Type here to search

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

```
4 rows in set (0.08 sec)

mysql> insert into country_new values('A','india','100');
ERROR 1366 (HY000): Incorrect integer value: 'india' for column 'region_id' at row 1
mysql> insert into country_new values('india','100','1');
Query OK, 1 row affected (0.12 sec)

mysql> insert into country_new values('china','300','3');
Query OK, 1 row affected (0.02 sec)

mysql> insert into country_new values('usa','1000','2');
ERROR 3819 (HY000): Check constraint 'country_new_chk_1' is violated.
mysql> insert into country_new values('italy','1000','2');
ERROR 3819 (HY000): Check constraint 'country_new_chk_1' is violated.
mysql> insert into country_new values('italy','100','2');
ERROR 3819 (HY000): Check constraint 'country_new_chk_1' is violated.
mysql> desc country_new;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| country_name | varchar(12) | YES  |     | NULL    |       |
| region_id    | int         | YES  |     | NULL    |       |
| con_id       | int         | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql>
```