

Aug 6 18:12

```
root@rps-Ubuntu: ~  
rps@rps-Ubuntu:~$ sudo -i  
[sudo] password for rps:  
root@rps-Ubuntu:~# mysql --version  
mysql Ver 8.0.39-0ubuntu0.24.04.1 for Linux on x86_64 ((Ubuntu))  
root@rps-Ubuntu:~# mysql  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 24  
Server version: 8.0.39-0ubuntu0.24.04.1 (Ubuntu)  
  
Copyright (c) 2000, 2024, Oracle and/or its affiliates.  
  
Oracle is a registered trademark of Oracle Corporation and/or its  
affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> SHOW DATABASES;  
+-----+  
| Database |  
+-----+  
| Employee |  
| SignIn_Application |  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
6 rows in set (0.00 sec)  
  
mysql> CREATE DATABASE Library_DB_Asg;  
Query OK, 1 row affected (0.07 sec)
```

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```
cloud4.rpsconsulting.in/console/#/client/MT4AGMABXlzcWw=

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6 rows in set (0.00 sec)

mysql> CREATE DATABASE Library_DB_Asg;
Query OK, 1 row affected (0.07 sec)

mysql> USE Library_DB_Asg;
Database changed

mysql> -- Tables creation
mysql>
mysql> CREATE TABLE Author (AuthorID INT AUTO_INCREMENT PRIMARY KEY, FstName VARCHAR(50), LastName VARCHAR(50), BirthDate DATE);
Query OK, 0 rows affected (0.93 sec)

mysql> CREATE TABLE Books (BookID INT AUTO_INCREMENT PRIMARY KEY, Title VARCHAR(100), AuthorID INT, Publish);
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 to use near ')' at line 1
mysql> CREATE TABLE Books (BookID INT AUTO_INCREMENT PRIMARY KEY, Title VARCHAR(100), AuthorID INT, Publish_Year INT, Genre VARCHAR(50), FOREIGN KEY (AuthorID) REFERENCES Author(AuthorID));
Query OK, 0 rows affected (0.43 sec)

mysql> CREATE TABLE Borrowers (BorrowerID INT AUTO_INCREMENT PRIMARY KEY, FirstName VARCHAR(50), LastName VARCHAR(50), Membership_Date DATE);
Query OK, 0 rows affected (1.02 sec)

mysql> CREATE TABLE Checkout (CheckoutID INT AUTO_INCREMENT PRIMARY KEY, BookID INT, BorrowerID INT, Checkout_Date DATE, FOREIGN KEY (BookID) REFERENCES Books (BookID), FOREIGN KEY (BorrowerID) REFERENCES Borrowers(BorrowerID));
Query OK, 0 rows affected (1.67 sec)

mysql> CREATE TABLE Fines (FineID INT AUTO_INCREMENT PRIMARY KEY, BorrowerID INT, Amount DECIMAL(5,2), Paid BOOLEAN, FOREIGN KEY (BorrowerID) REFERENCES Borrowers (BorrowerID));
Query OK, 0 rows affected (1.28 sec)

mysql> SHOW TABLES;
```

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```
mysql> CREATE TABLE Fines (FineID INT AUTO_INCREMENT PRIMARY KEY, BorrowerID INT, Amount DECIMAL(5,2), Paid BOOLEAN, FOREIGN KEY (BorrowerID) REFERENCES Borrowers (BorrowerID));
Query OK, 0 rows affected (1.28 sec)
```

```
mysql> SHOW TABLES;
+-----+
| Tables_in_Library_DB_Asg |
+-----+
| Author                    |
| Books                    |
| Borrowers                 |
| Checkout                  |
| Fines                     |
+-----+
5 rows in set (0.01 sec)
```

```
mysql> SHOW FIELDS FROM Author;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| AuthorID   | int       | NO   | PRI | NULL    | auto_increment |
| FirstName  | varchar(50) | YES  |     | NULL    |              |
| LastName   | varchar(50) | YES  |     | NULL    |              |
| BirthDate  | date      | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)
```

```
mysql> SHOW FIELDS FROM Books;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| BookID     | int       | NO   | PRI | NULL    | auto_increment |
| Title      | varchar(100) | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
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4 rows in set (0.01 sec)
mysql> SHOW FIELDS FROM Books;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| BookID     | int       | NO   | PRI | NULL    | auto_increment |
| Title      | varchar(100) | YES  |     | NULL    |              |
| AuthorID   | int       | YES  | MUL | NULL    |              |
| Publish_Year | int       | YES  |     | NULL    |              |
| Genre      | varchar(50) | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)
mysql> SHOW FIELDS FROM Borrowers;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| BorrowerID | int       | NO   | PRI | NULL    | auto_increment |
| FirstName  | varchar(50) | YES  |     | NULL    |              |
| LastName   | varchar(50) | YES  |     | NULL    |              |
| Membership_Date | date      | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)
mysql> SHOW FIELDS FROM Checkout;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| CheckoutID | int       | NO   | PRI | NULL    | auto_increment |
| BookID     | int       | YES  | MUL | NULL    |              |
| BorrowerID | int       | YES  | MUL | NULL    |              |
+-----+-----+-----+-----+-----+-----+
```

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4 rows in set (0.01 sec)

mysql> SHOW FIELDS FROM Checkout;
+-----+
| Field      | Type | Null | Key | Default | Extra          |
+-----+
| CheckoutID | int  | NO   | PRI | NULL    | auto_increment |
| BookID     | int  | YES  | MUL | NULL    |                |
| BorrowerID | int  | YES  | MUL | NULL    |                |
| Checkout_Date | date | YES  |     | NULL    |                |
+-----+
4 rows in set (0.00 sec)

mysql> SHOW FIELDS FROM Fines;
+-----+
| Field      | Type          | Null | Key | Default | Extra          |
+-----+
| FineID     | int           | NO   | PRI | NULL    | auto_increment |
| BorrowerID | int           | YES  | MUL | NULL    |                |
| Amount     | decimal(5,2)  | YES  |     | NULL    |                |
| Paid       | tinyint(1)    | YES  |     | NULL    |                |
+-----+
4 rows in set (0.00 sec)

mysql> -- Use of Alter
mysql>
mysql> ALTER TABLE Authors ADD COLUMN Nationality VARCHAR(50);
ERROR 1146 (42S02): Table 'Library_DB_Asg.Authors' doesn't exist
mysql> ALTER TABLE Author ADD COLUMN Nationality VARCHAR(50);
Query OK, 0 rows affected (0.47 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SHOW FIELDS FROM Author;
```


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```
mysql> -- Use of Alter
mysql>
mysql> ALTER TABLE Authors ADD COLUMN Nationality VARCHAR(50);
ERROR 1146 (42S02): Table 'Library_DB_Asg.Authors' doesn't exist
mysql> ALTER TABLE Author ADD COLUMN Nationality VARCHAR(50);
Query OK, 0 rows affected (0.47 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SHOW FIELDS FROM Author;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| AuthorID | int | NO | PRI | NULL | auto_increment |
| FirstName | varchar(50) | YES | | NULL | |
| LastName | varchar(50) | YES | | NULL | |
| BirthDate | date | YES | | NULL | |
| Nationality | varchar(50) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql> ALTER TABLE Books MODIFY COLUMN Genre VARCHAR(50) NOT NULL;
Query OK, 0 rows affected (1.46 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SHOW FIELDS FROM Books;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| BookID | int | NO | PRI | NULL | auto_increment |
| Title | varchar(100) | YES | | NULL | |
| AuthorID | int | YES | MUL | NULL | |
| Publish_Year | int | YES | | NULL | |
| Genre | varchar(50) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+
```

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```
mysql> ALTER TABLE Books MODIFY COLUMN Genre VARCHAR(50) NOT NULL;
Query OK, 0 rows affected (1.46 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SHOW FIELDS FROM Books;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| BookID     | int       | NO   | PRI | NULL    | auto_increment |
| Title      | varchar(100) | YES  |     | NULL    |              |
| AuthorID   | int       | YES  | MUL | NULL    |              |
| Publish_Year | int       | YES  |     | NULL    |              |
| Genre      | varchar(50) | NO   |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> ALTER TABLE Author DROP COLUMN Nationality;
Query OK, 0 rows affected (0.51 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SHOW FIELDS FROM Author;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| AuthorID   | int       | NO   | PRI | NULL    | auto_increment |
| FirstName  | varchar(50) | YES  |     | NULL    |              |
| LastName   | varchar(50) | YES  |     | NULL    |              |
| BirthDate  | date      | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
```