```
Microsoft Windows [Version 10.0.22631.3085]
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C:\MAMP\bin\mysql\bin>mysql -u root
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: NO)

C:\MAMP\bin\mysql\bin>mysql -u root -p
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 27
Server version: 5.7.24 MySQL Community Server (GPL)

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owners.

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

mysql> CREATE Database ABC_Company
    -> USE ABC_Compnay;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for
e right syntax to use near 'USE ABC_Compnay' at line 2
mysql> USE ABC_Company;
Database changed
mysql> CREATE TABLE Departments (
    ->      DepartmentID CHAR(4) PRIMARY KEY,
    ->      Department VARCHAR(50) NOT NULL
    -> );
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> CREATE Database ABC_Company
    -> USE ABC_Compnay;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for th
e right syntax to use near 'USE ABC_Compnay' at line 2
mysql> USE ABC_Company;
Database changed
mysql> CREATE TABLE Departments (
    ->      DepartmentID CHAR(4) PRIMARY KEY,
    ->      Department VARCHAR(50) NOT NULL
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO Departments (DepartmentID, Department)
    -> VALUES
    ->      ('D001', 'IT'),
    ->      ('D002', 'HR'),
    ->      ('D003', 'Marketing');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

```
mysql> ALTER TABLE Departments
    -> CHANGE COLUMN Department DeptName VARCHAR(50) NOT NULL;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Departments;
+--------------+-----------+
| DepartmentID | DeptName  |
+--------------+-----------+
| D001         | IT        |
| D002         | HR        |
| D003         | Marketing |
+--------------+-----------+
3 rows in set (0.00 sec)
```

```
mysql> ALTER TABLE Departments
    -> ADD COLUMN No_Employees INT;
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> UPDATE Departments
    -> SET No_Employees = CASE
    ->     WHEN DeptName = 'IT' THEN 20
    ->     WHEN DeptName = 'HR' THEN 5
    ->     WHEN DeptName = 'Marketing' THEN 8 ELSE 0 END;
Query OK, 3 rows affected (0.00 sec)
Rows matched: 3  Changed: 3  Warnings: 0

mysql> SELECT * FROM Departments;
+--------------+-----------+--------------+
| DepartmentID | DeptName  | No_Employees |
+--------------+-----------+--------------+
| D001         | IT        |           20 |
| D002         | HR        |            5 |
| D003         | Marketing |            8 |
+--------------+-----------+--------------+
3 rows in set (0.00 sec)
```

```
mysql> ALTER TABLE Departments
    -> CHANGE COLUMN DepartmentID DeptName INT;
ERROR 1060 (42S21): Duplicate column name 'DeptName'
mysql> SELECT * FROM Departments;
+--------------+-----------+--------------+
| DepartmentID | DeptName  | No_Employees |
+--------------+-----------+--------------+
| D001         | IT        |           20 |
| D002         | HR        |            5 |
| D003         | Marketing |            8 |
+--------------+-----------+--------------+
3 rows in set (0.00 sec)

mysql> ALTER TABLE Departments
    -> CHANGE COLUMN DepartmentID DeptName INT;
ERROR 1060 (42S21): Duplicate column name 'DeptName'
mysql> SELECT * FROM Departments;
+--------------+-----------+--------------+
| DepartmentID | DeptName  | No_Employees |
+--------------+-----------+--------------+
| D001         | IT        |           20 |
| D002         | HR        |            5 |
| D003         | Marketing |            8 |
+--------------+-----------+--------------+
3 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM Departments;
+--------------+------------+--------------+
| DepartmentID | DeptName   | No_Employees |
+--------------+------------+--------------+
| D001         | IT         |           20 |
| D002         | HR         |            5 |
| D003         | Marketing  |            8 |
+--------------+------------+--------------+
3 rows in set (0.00 sec)

mysql> SELECT * FROM Departments;
+--------------+------------+--------------+
| DepartmentID | DeptName   | No_Employees |
+--------------+------------+--------------+
| D001         | IT         |           20 |
| D002         | HR         |            5 |
| D003         | Marketing  |            8 |
+--------------+------------+--------------+
3 rows in set (0.00 sec)

mysql> ALTER TABLE Departments
    -> DROP COLUMN No_Employees;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Departments;
```

```
mysql> ALTER TABLE Departments
    -> DROP COLUMN No_Employees;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Departments;
+--------------+------------+
| DepartmentID | DeptName   |
+--------------+------------+
| D001         | IT         |
| D002         | HR         |
| D003         | Marketing  |
+--------------+------------+
3 rows in set (0.00 sec)
```

```
mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| abc_company        |
| mysql              |
| performance_schema |
| sys                |
| thiwanga           |
| user               |
+--------------------+
7 rows in set (0.00 sec)
```

```
mysql> CREATE DATABASE LearningCenter;
Query OK, 1 row affected (0.00 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| abc_company        |
| learningcenter     |
| mysql              |
| performance_schema |
| sys                |
| thiwanga           |
| user               |
+--------------------+
8 rows in set (0.00 sec)

mysql> CREATE TABLE Courses (
    ->      CourseID VARCHAR(5) PRIMARY KEY,
    ->      Course VARCHAR(50) NOT NULL
    -> );
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE Students (
    ->      StudentID VARCHAR(7) PRIMARY KEY,
    ->      Fname VARCHAR(50) NOT NULL,
    ->      Lname VARCHAR(50) NOT NULL
    -> );
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> INSERT INTO Courses (CourseID, Course)
    -> VALUES
    ->      ('C001', 'CAA'),
    ->      ('C002', 'FIT'),
    ->      ('D003', 'DIT');
Query OK, 3 rows affected (0.00 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> INSERT INTO Students (StudentID, Fname, Lname)
    -> VALUES
    ->      ('LC0001', 'Dumeesha', 'Thathsarani'),
    ->      ('LC0002', 'Kelum', 'Perera'),
    ->      ('LC0003', 'Lasith', 'Madhushan'),
    ->      ('LC0004', 'Heshan', 'Bagya'),
    ->      ('LC0005', 'Achini', 'Nimasha');
Query OK, 5 rows affected (0.00 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE Students
    -> ADD COLUMN email VARCHAR(100);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> UPDATE Students
    -> SET email = CASE
    ->      WHEN StudentID = 'LC0001' THEN 'dumeesha@email.com'
    ->      WHEN StudentID = 'LC0002' THEN 'kelum@email.com'
    ->      WHEN StudentID = 'LC0003' THEN 'lasith@email.com'
    ->      WHEN StudentID = 'LC0004' THEN 'heshan@email.com'
    ->      WHEN StudentID = 'LC0005' THEN 'achini@email.com' ELSE NULL END;
Query OK, 5 rows affected (0.00 sec)
Rows matched: 5  Changed: 5  Warnings: 0
```

```
mysql> SELECT * FROM Courses;
+----------+--------+
| CourseID | Course |
+----------+--------+
| C001     | CAA    |
| C002     | FIT    |
| D003     | DIT    |
+----------+--------+
3 rows in set (0.00 sec)

mysql> SELECT * FROM Students;
+-----------+----------+-------------+---------------------+
| StudentID | Fname    | Lname       | email               |
+-----------+----------+-------------+---------------------+
| LC0001    | Dumeesha | Thathsarani | dumeesha@email.com  |
| LC0002    | Kelum    | Perera      | kelum@email.com     |
| LC0003    | Lasith   | Madhushan   | lasith@email.com    |
| LC0004    | Heshan   | Bagya       | heshan@email.com    |
| LC0005    | Achini   | Nimasha     | achini@email.com    |
+-----------+----------+-------------+---------------------+
5 rows in set (0.00 sec)

mysql> UPDATE Students
    -> SET email = CASE
    ->     WHEN StudentID = 'LC0001' THEN 'dt@gmail.com'
    ->     WHEN StudentID = 'LC0002' THEN 'kp@gmail.com'
    ->     WHEN StudentID = 'LC0003' THEN 'lm@gmail.com'
    ->     WHEN StudentID = 'LC0004' THEN 'hb@gmail.com'
    ->     WHEN StudentID = 'LC0005' THEN 'an@gmail.com'
    ->     ELSE NULL END;
Query OK, 5 rows affected (0.00 sec)
Rows matched: 5  Changed: 5  Warnings: 0
```

```
mysql> SELECT * FROM Students;
+-----------+----------+-------------+---------------+
| StudentID | Fname    | Lname       | email         |
+-----------+----------+-------------+---------------+
| LC0001    | Dumeesha | Thathsarani | dt@gmail.com  |
| LC0002    | Kelum    | Perera      | kp@gmail.com  |
| LC0003    | Lasith   | Madhushan   | lm@gmail.com  |
| LC0004    | Heshan   | Bagya       | hb@gmail.com  |
| LC0005    | Achini   | Nimasha     | an@gmail.com  |
+-----------+----------+-------------+---------------+
5 rows in set (0.00 sec)

mysql> USE LearningCenter;
Database changed
mysql> ALTER TABLE Courses
    -> CHANGE COLUMN Course CourseShortName VARCHAR(50) NOT NULL;
```