# MySQL安装指南

- 创建MySQL数据库

```
apt install mysql-server
```

```
Created symlink /etc/systemd/system/multi-user.target.wants/mysql.service → /lib/systemd/system/mysql.se
rvice.
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.

Setting up libcgi-pm-perl (4.54-1) ...###################################################.......]
Progress: [ 93%] [##############################################################.......]
Setting up libhtml-template-perl (2.97-1.1) ...##############################################.....]

Progress: [ 94%] [################################################################....]
Setting up mysql-server (8.0.41-0ubuntu0.22.04.1) ...####################################....]

Progress: [ 96%] [#################################################################...]
Setting up libcgi-fast-perl (1:2.15-1) ...#####################################...]

Progress: [ 98%] [###################################################################..]
Processing triggers for libc-bin (2.35-0ubuntu3.6) ...###################################.]
root@autodl-container-eb2e4cadca-dbe44660:~#
```

然后启动mysql，并设置初始密码：

```
mysqld &
mysql
```

进入到SQL命令行后，输入如下命令：

```
ALTER USER 'root'@'localhost' IDENTIFIED BY '123';
```

> 此处密码可根据实际需求设置。

```
root@autodl-container-eb2e4cadca-dbe44660:~# mysqld &
[1] 606918
root@autodl-container-eb2e4cadca-dbe44660:~# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.41-0ubuntu0.22.04.1 (Ubuntu)

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owners.

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

mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY '123';
Query OK, 0 rows affected (0.01 sec)

mysql> exit;
Bye
```

然后输入 `exit;` 即可退出。

然后再次进入MySQL，并根据要求输入密码：

```
mysql -u root -p
```

然后创建一个数据库：

```
CREATE DATABASE school;
USE school;
```

然后创建一个虚拟表格，里面包含了10位同学各自3门课程的分数：

```
CREATE TABLE students_scores (
    id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(50),
    course1 INT,
    course2 INT,
    course3 INT
);
```

```
INSERT INTO students_scores (name, course1, course2, course3)
VALUES
    ('学生1', 85, 92, 78),
    ('学生2', 76, 88, 91),
    ('学生3', 90, 85, 80),
    ('学生4', 65, 70, 72),
    ('学生5', 82, 89, 95),
    ('学生6', 91, 93, 87),
    ('学生7', 77, 78, 85),
    ('学生8', 88, 92, 91),
    ('学生9', 84, 76, 80),
    ('学生10', 89, 90, 92);
```

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

mysql> USE school;
Database changed
mysql> CREATE TABLE students_scores (
    ->     id INT AUTO_INCREMENT PRIMARY KEY,
    ->     name VARCHAR(50),
    ->     course1 INT,
    ->     course2 INT,
    ->     course3 INT
    -> );
Query OK, 0 rows affected (0.01 sec)

mysql> INSERT INTO students_scores (name, course1, course2, course3)
    -> VALUES
    ->     ('学生1', 85, 92, 78),
    ->     ('学生2', 76, 88, 91),
    ->     ('学生3', 90, 85, 80),
    ->     ('学生4', 65, 70, 72),
    ->     ('学生5', 82, 89, 95),
    ->     ('学生6', 91, 93, 87),
    ->     ('学生7', 77, 78, 85),
    ->     ('学生8', 88, 92, 91),
    ->     ('学生9', 84, 76, 80),
    ->     ('学生10', 89, 90, 92);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

然后即可查看数据集基本情况：

```
SELECT * FROM students_scores;
```

```
mysql> SELECT * FROM students_scores;
+----+----------+---------+---------+---------+
| id | name     | course1 | course2 | course3 |
+----+----------+---------+---------+---------+
|  1 | 学生1     |      85 |      92 |      78 |
|  2 | 学生2     |      76 |      88 |      91 |
|  3 | 学生3     |      90 |      85 |      80 |
|  4 | 学生4     |      65 |      70 |      72 |
|  5 | 学生5     |      82 |      89 |      95 |
|  6 | 学生6     |      91 |      93 |      87 |
|  7 | 学生7     |      77 |      78 |      85 |
|  8 | 学生8     |      88 |      92 |      91 |
|  9 | 学生9     |      84 |      76 |      80 |
| 10 | 学生10    |      89 |      90 |      92 |
+----+----------+---------+---------+---------+
10 rows in set (0.00 sec)
```

此外，还需要刷新身份验证，使得其他库（如pymysql）可以通过密码验证登录：

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY '123';
```

```
mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY '123';
Query OK, 0 rows affected (0.01 sec)
```