

浙江大学



《数据库系统》 实验报告

作业名称 :	DBMS的安装和使用
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实验名称

1 实验目的

- 1. 通过安装某个数据库管理系统，初步了解DBMS的运行环境。
- 2. 了解DBMS交互界面、图形界面和系统管理工具的使用。
- 3. 搭建实验平台。

2 实验环境

- 1. 操作系统：Windows
- 2. 数据库管理系统：MySQL

3 实验流程

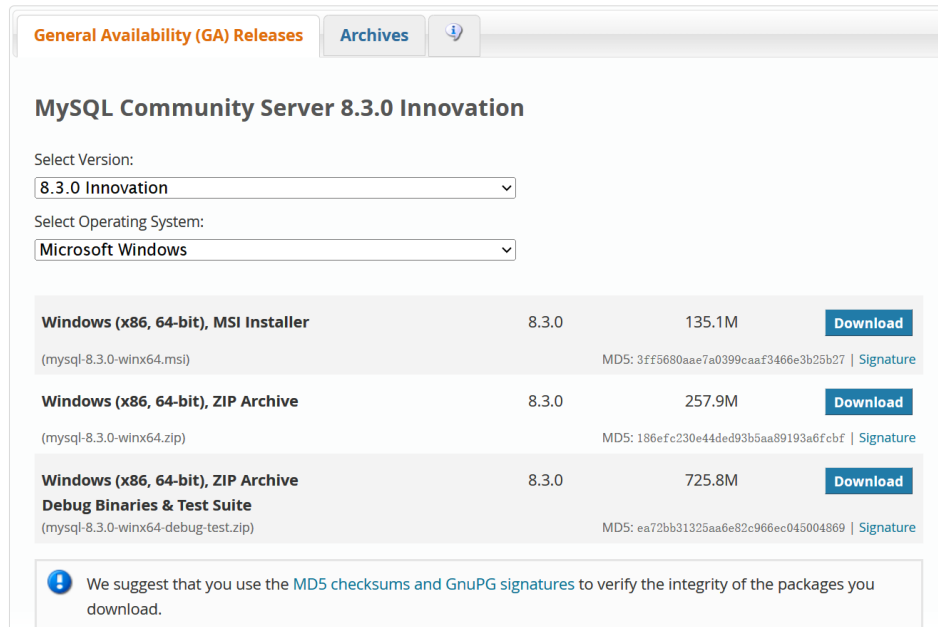
3.1 根据某个DBMS的安装说明等文档，安装DBMS。

- 1. <https://dev.mysql.com/downloads> 下载社区版（主要是免费）MySQL Community Server

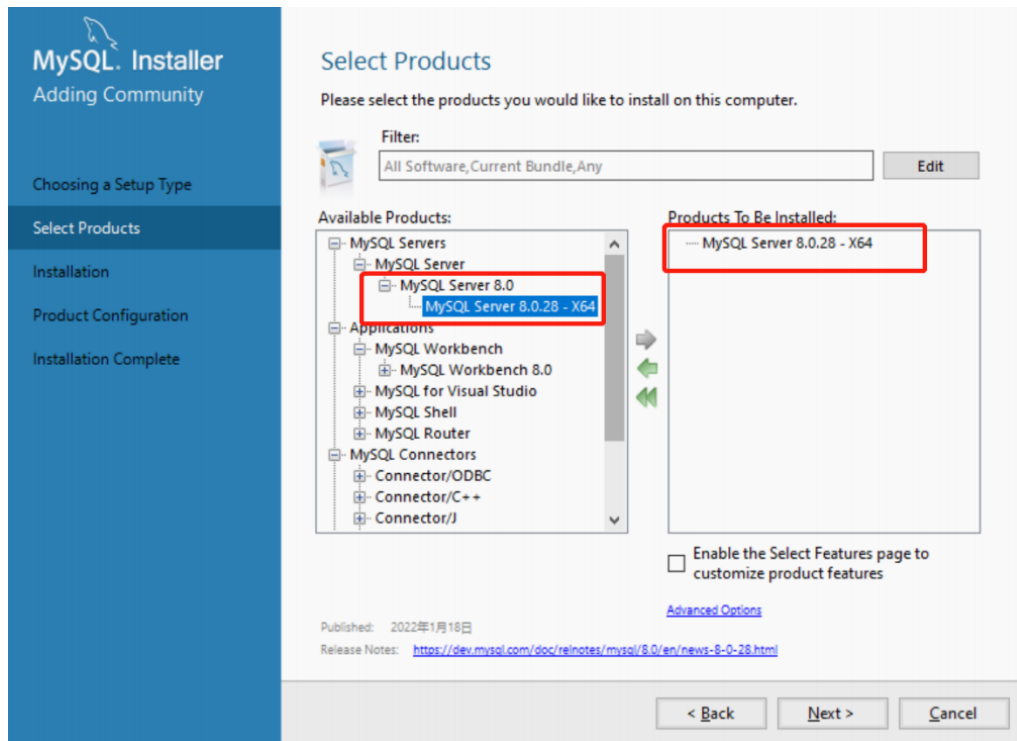
MySQL Community Downloads

- [MySQL Yum Repository](#)
- [MySQL APT Repository](#)
- [MySQL SUSE Repository](#)
- [MySQL Community Server](#)
- [MySQL NDB Cluster](#)
- [MySQL Router](#)
- [MySQL Shell](#)
- [MySQL Operator](#)
- [MySQL NDB Operator](#)
- [MySQL Workbench](#)
- [MySQL Installer for Windows](#)
- [C API \(libmysqlclient\)](#)
- [Connector/C++](#)
- [Connector/J](#)
- [Connector/NET](#)
- [Connector/Node.js](#)
- [Connector/ODBC](#)
- [Connector/Python](#)
- [MySQL Native Driver for PHP](#)
- [MySQL Benchmark Tool](#)
- [Time zone description tables](#)
- [Download Archives](#)

2. 这里我选择8.3.0 msi自动安装

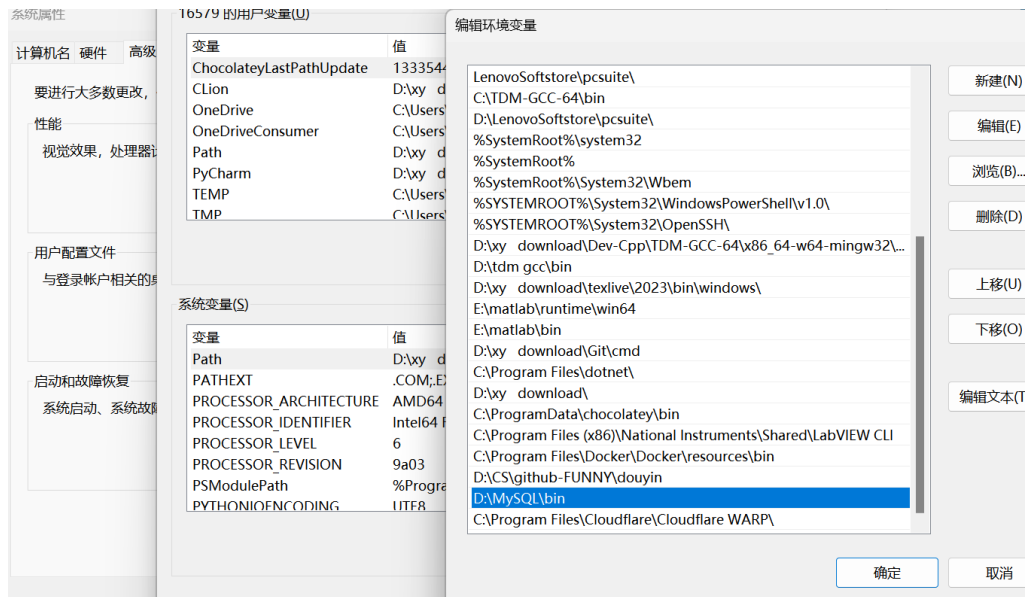


3. 通过设置Advance Options 来安装到D盘, (C盘已经被压榨得差不多了)



4. 添加好用户, 设置完成密码即可。

5. 在控制面板跳转到系统的环境变量位置, 添加MySQL的变量到系统变量里面, 以保证命令行跳转正确。



```
C:\Users\16579>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.36 MySQL Community Server - GPL

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owners.

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

mysql> |
```

3.2 了解DBMS的用户管理。

1.查看所有用户

```
select user,host from mysql.user;
```

```
mysql> select user,host from mysql.user;
+-----+-----+
| user                | host                |
+-----+-----+
| mysql.infoschema    | localhost           |
| mysql.session       | localhost           |
| mysql.sys           | localhost           |
| root                | localhost           |
+-----+-----+
4 rows in set (0.00 sec)
```

2.查看当前用户

```
select user();
```

```
mysql> select user();
+-----+
| user() |
+-----+
| root@localhost |
+-----+
1 row in set (0.00 sec)
```

3.添加用户

```
create user 'user01' @'localhost' identified by 'user01';
```

```
mysql> create user 'user01' @'localhost' identified by 'user01';
Query OK, 0 rows affected (0.04 sec)

mysql> select user,host from mysql.user;
+-----+-----+
| user          | host          |
+-----+-----+
| mysql.infoschema | localhost    |
| mysql.session   | localhost    |
| mysql.sys       | localhost    |
| root           | localhost    |
| user01         | localhost    |
+-----+-----+
5 rows in set (0.00 sec)
```

4.登录用户

```
mysql -u <user_name> -p
```

```
C:\Users\16579>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.36 MySQL Community Server - GPL
```

3.3 熟悉交互界面的基本交互命令。

1. 创建数据库，查看数据库，选择数据库， 删除数据库

```
mysql> CREATE DATABASE <database_name>;
```

```
mysql> CREATE DATABASE test_db;  
Query OK, 1 row affected (0.02 sec)
```

```
mysql> show databases();
```

```
mysql> show databases  
-> ;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| schema1 |  
| sys |  
| test_db |  
+-----+  
6 rows in set (0.00 sec)
```

```
mysql> USE <database_name>
```

```
mysql> USE test_db  
Database changed  
mysql> |
```

```
mysql> DROP DATABASE <database_name>;
```

```

Database changed
mysql> DROP DATABASE test_db
      -> ;
Query OK, 0 rows affected (0.02 sec)

mysql> |

```

2. 创建数据表，查看数据表，

```

CREATE TABLE test(
    ID INT(11),
    Name VARCHAR(25),
    Course VARCHAR(25),
    Age INT(10)
);
show tables;

```

```

mysql> CREATE TABLE test
      -> (
      -> ID INT(11),
      -> Name VARCHAR(25),
      -> Course VARCHAR(25),
      -> Age INT(10)
      -> );
Query OK, 0 rows affected, 2 warnings (0.05 sec)

mysql> show tables;
+-----+
| Tables_in_test_db |
+-----+
| test               |
+-----+
1 row in set (0.02 sec)

```

```

DROP TABLE <table_name> ;

```

```

mysql> DROP TABLE test ;
Query OK, 0 rows affected (0.02 sec)

mysql> show tables;
Empty set (0.00 sec)

```

3. 插入数据

```
INSERT INTO table_name (column1, column2, column3, ...)  
VALUES (value1, value2, value3, ...);
```

```
mysql> INSERT INTO test (ID,Name,Course,Age)  
-> VALUES (55,"WangXy","Database",20)  
-> ;  
Query OK, 1 row affected (0.02 sec)  
  
mysql> |
```

4. 查询

-- 标准格式

```
SELECT column1, column2, ...  
FROM table_name  
[WHERE condition]  
[ORDER BY column_name [ASC | DESC]]  
[LIMIT number];
```

-- 选择所有列的所有行

```
SELECT * FROM users;
```

-- 选择特定列的所有行

```
SELECT username, email FROM users;
```

-- 添加 WHERE 子句，选择满足条件的行

```
SELECT * FROM users WHERE is_active = TRUE;
```

-- 添加 ORDER BY 子句，按照某列的升序排序

```
SELECT * FROM users ORDER BY birthdate;
```

-- 添加 ORDER BY 子句，按照某列的降序排序

```
SELECT * FROM users ORDER BY birthdate DESC;
```

-- 添加 LIMIT 子句，限制返回的行数

```
SELECT * FROM users LIMIT 10;
```



```
mysql> SELECT * FROM test;
+-----+-----+-----+-----+
| ID    | Name   | Course | Age   |
+-----+-----+-----+-----+
| 55    | WangXy | Database | 20    |
+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT Name, course FROM test;
+-----+-----+
| Name   | course |
+-----+-----+
| WangXy | Database |
+-----+-----+
1 row in set (0.00 sec)
```

4 遇到的问题及解决方法

- 一些报错
 - 先看看输入法是不是调成中文，分号、括号的写入会自动判断，如果不是英文会报错
 - 查询技术文档
 - 最后一步实在无法解决，卸了MySQL重装
- 输入格式不对
 - 记得字符串要加引号.

5 总结

本次的实验还算简单，基本属于Week1-Week2的第一次适应，上了第二节课才懂这些查询的操作，也就懂了数据库的架构设计。但是光用命令行仍不太舒服，最近听说有MySQL的GUI，下一节实验课可以试试，哦对了，好像是叫MySQL Workbench