74+戴一帆+211205102388

作业7

戴一帆

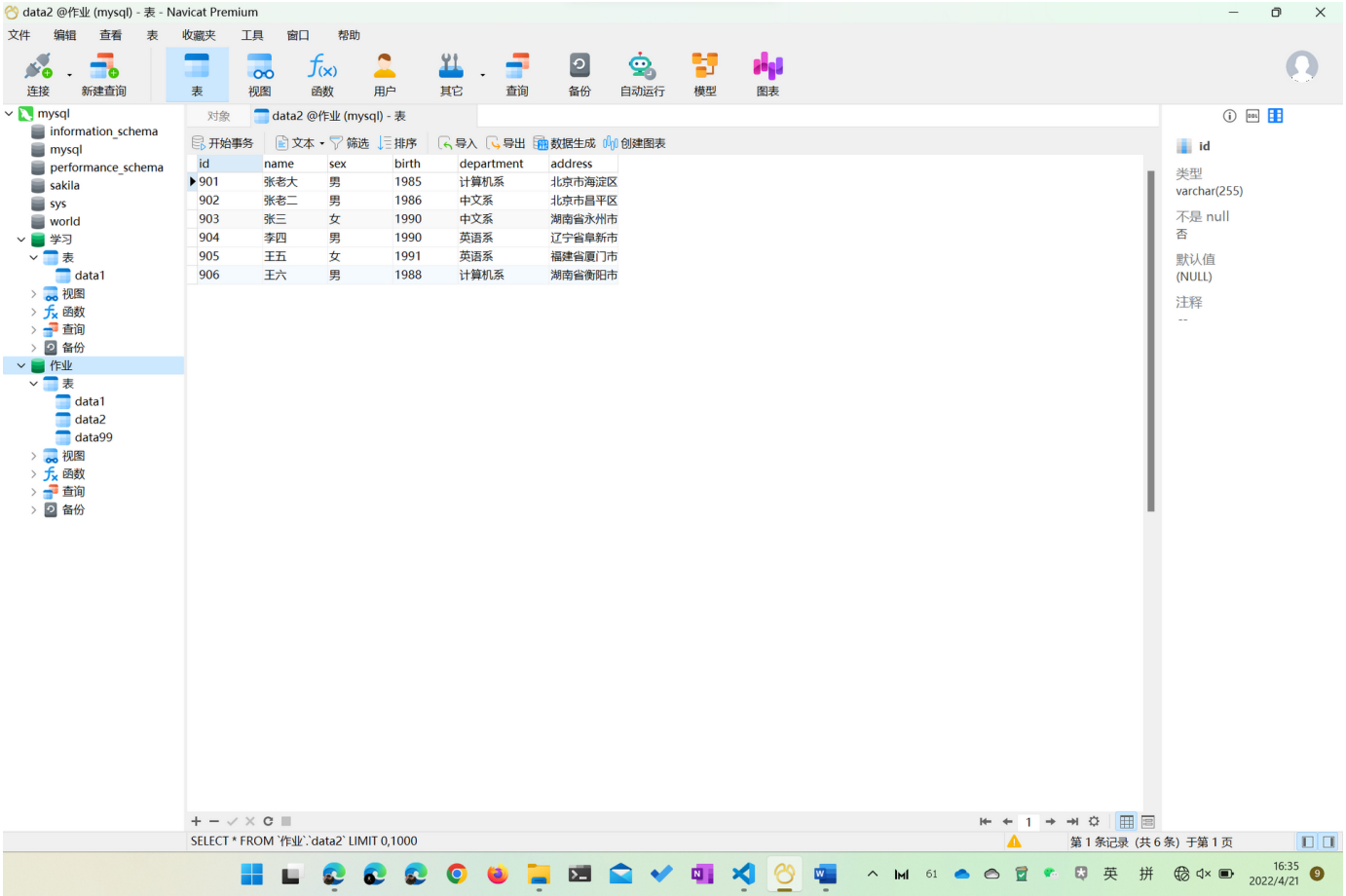
2022年4月21号

1. 创建data2表

要求：

a) 使用python连接SQL语句创建一个叫data2的表；

b) 使用python连接SQL语句将数据插入到表data2中；



```
    sql = "select * from data2"
    cur.execute(sql)
    result2 = cur.fetchall()
    print(result2)
```

[6] ✓ 0.1s Python

```
(('901', '张老大', '男', '1985', '计算机系', '北京市海淀区'), ('902', '张老二', '男', '1986', '中文系', '北京市昌平区'), ('903', '张三', '女', '1990', '中文系', '湖南省永州市'), ('904', '李四', '男', '1990', '英语系', '辽宁省阜新市'), ('905', '王五', '女', '1991', '英语系', '福建省厦门市'), ('906', '王六', '男', '1988', '计算机系', '湖南省衡阳市'))
```

利用pymysql模块连接，打开游标，利用create table...创建data2并运行sql查看；其次利用insert into ~ （）values（）向data2里添加数据，然后运行提交，关闭游标退出连接。

```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
                       db = "作业" , charset='utf8') ##连接
cur = conn.cursor()  # 游标
##手动创建一个表格
sql = '''CREATE TABLE `data2` (
  `id` varchar(255) DEFAULT NULL,
  `name` varchar(255) DEFAULT NULL,
  `sex` varchar(255) DEFAULT NULL,
  `birth` varchar(255) DEFAULT NULL,
  `department` varchar(255) DEFAULT NULL,
  `address` varchar(255) DEFAULT NULL
) ENGINE = InnoDB DEFAULT
CHARSET = utf8mb4
COLLATE = utf8mb4_0900_ai_ci;'''
cur.execute(sql)
result1 = cur.fetchall()
print(result1)

sql = '''INSERT INTO data2 (id,name,sex,birth,department,address) VALUES (901,'张老大','男',1985,'计算机系','北京市海淀区')
'''
sql1 = '''INSERT INTO data2(id, name, sex, birth, department, address) VALUES(902, '张老二', '男', 1986, '中文系', '北京市昌平区')'''
sql2 = '''INSERT INTO data2(id, name, sex, birth, department, address) VALUES(903, '张三', '女', 1990, '中文系', '湖南省永州市')'''
sql3 = '''INSERT INTO data2(id, name, sex, birth, department, address) VALUES(904, '李四', '男', 1990, '英语系', '辽宁省阜新市')'''
sql4 = '''INSERT INTO data2(id, name, sex, birth, department, address) VALUES(905, '王五', '女', 1991, '英语系', '福建省厦门市')'''
sql5 = '''INSERT INTO data2(id, name, sex, birth, department, address) VALUES(906, '王六', '男', 1988, '计算机系', '湖南省衡阳市')'''
```

```
cur.execute(sql)
cur.execute(sql1)
cur.execute(sql2)
cur.execute(sql3)
cur.execute(sql4)
cur.execute(sql5)
conn.commit()
cur.close() # 关闭游标
conn.close()# 退出连接
```

重新连接data2，运行游标、编写sql、运行ssql查看数据，最后退出

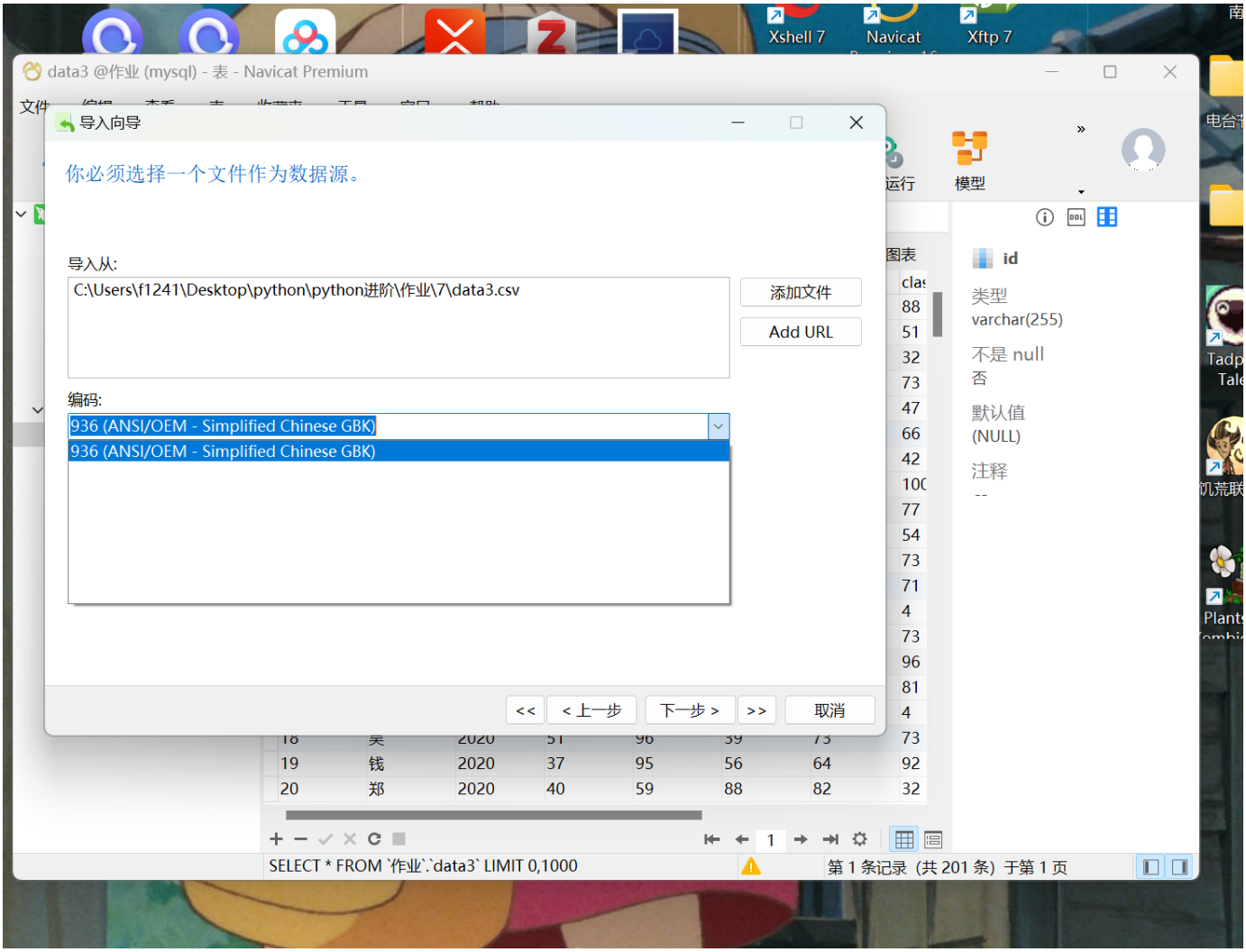
```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
                       db = "作业" , charset='utf8') ##连接
cur = conn.cursor()  # 游标
sql = "select * from data2"
cur.execute(sql)
result2 = cur.fetchall()
print(result2)
cur.close() # 关闭游标
conn.close()# 退出连接
```

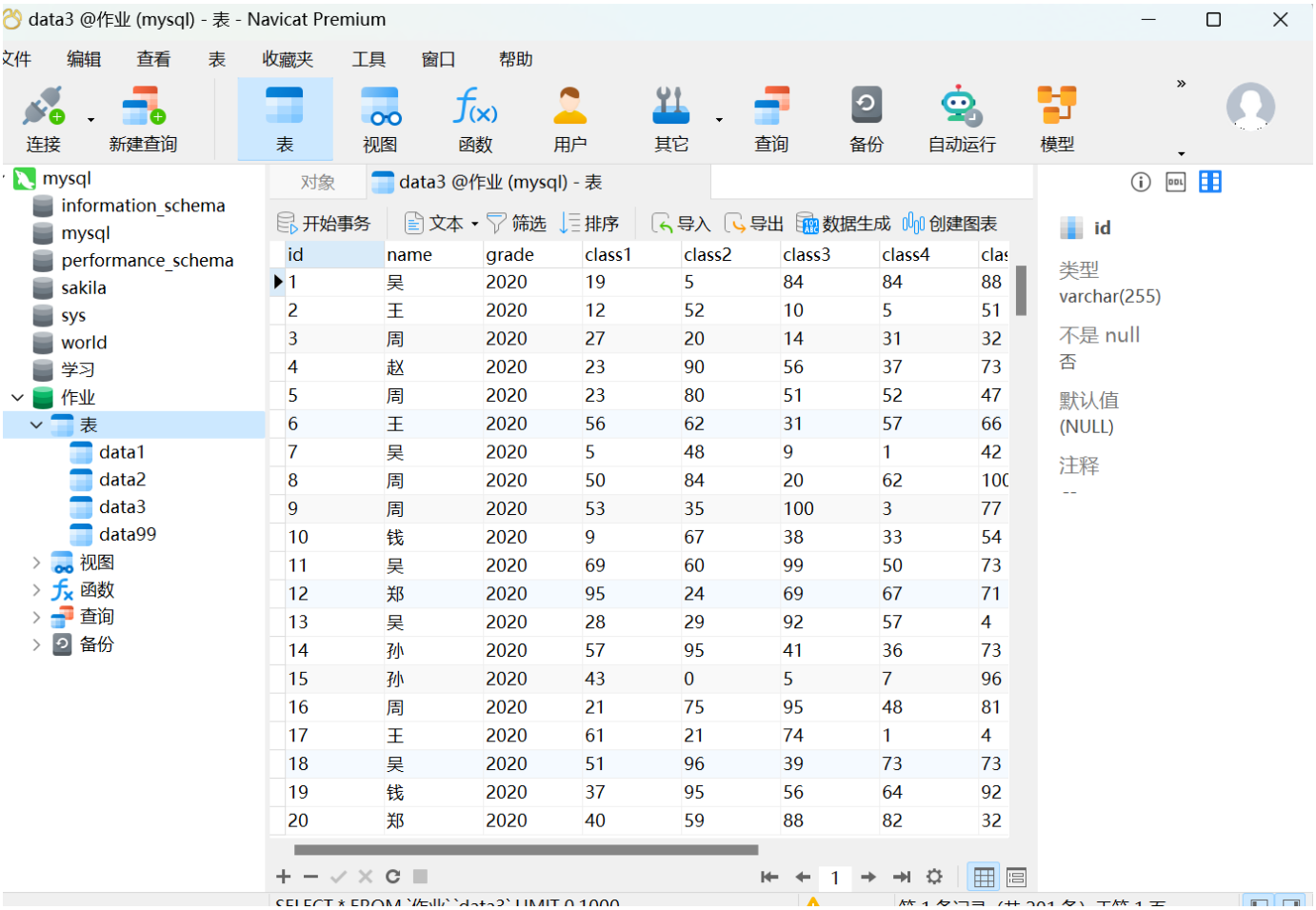
2. 将data3.csv的表格导入到mysql中，使用python编写SQL语句

要求:

a) 列查询：单独挑选出列名为“grade”的数据；
b) 行查询：查询name等于“吴”的所有数据；
c) 在表中添加一行数据，数据为(999,吴,2022,19,5,84,84,88,3,99,18)
d) 条件查询：查询name等于“吴”和列名等于“grade”的数据；
e) 条件查询：查询2020级中class1的成绩大于95的学生的id和name；
f) 计算2020级class1~class8所有科目的平均值；
g) 计算所有年级class1~class8所有科目的平均值；

导入data3


data3 @作业 (mysql) - 表 - Navicat Premium
导入向导
你必须选择一个文件作为数据源。
导入从:
C:\Users\f1241\Desktop\python\python进阶\作业\7\data3.csv
添加文件
Add URL
编码:
936 (ANSI/OEM - Simplified Chinese GBK)
936 (ANSI/OEM - Simplified Chinese GBK)
<< < 上一步 下一步 > >> 取消
SELECT * FROM `作业`.`data3` LIMIT 0,1000
第 1 条记录 (共 201 条) 于第 1 页


data3 @作业 (mysql) - 表 - Navicat Premium
文件 编辑 查看 表 收藏夹 工具 窗口 帮助
连接 新建查询 表 视图 函数 用户 其它 查询 备份 自动运行 模型
mysql
information_schema
mysql
performance_schema
sakila
sys
world
学习
作业
表
data1
data2
data3
data99
视图
函数
查询
备份
对象
data3 @作业 (mysql) - 表
开始事务 文本 筛选 排序 导入 导出 数据生成 创建图表
id name grade class1 class2 class3 class4 cla
1 吴 2020 19 5 84 84 88
2 王 2020 12 52 10 5 51
3 周 2020 27 20 14 31 32
4 赵 2020 23 90 56 37 73
5 周 2020 23 80 51 52 47
6 王 2020 56 62 31 57 66
7 吴 2020 5 48 9 1 42
8 周 2020 50 84 20 62 100
9 周 2020 53 35 100 3 77
10 钱 2020 9 67 38 33 54
11 吴 2020 69 60 99 50 73
12 郑 2020 95 24 69 67 71
13 吴 2020 28 29 92 57 4
14 孙 2020 57 95 41 36 73
15 孙 2020 43 0 5 7 96
16 周 2020 21 75 95 48 81
17 王 2020 61 21 74 1 4
18 吴 2020 51 96 39 73 73
19 钱 2020 37 95 56 64 92
20 郑 2020 40 59 88 82 32
id
类型
varchar(255)
不是 null
否
默认值
(NULL)
注释
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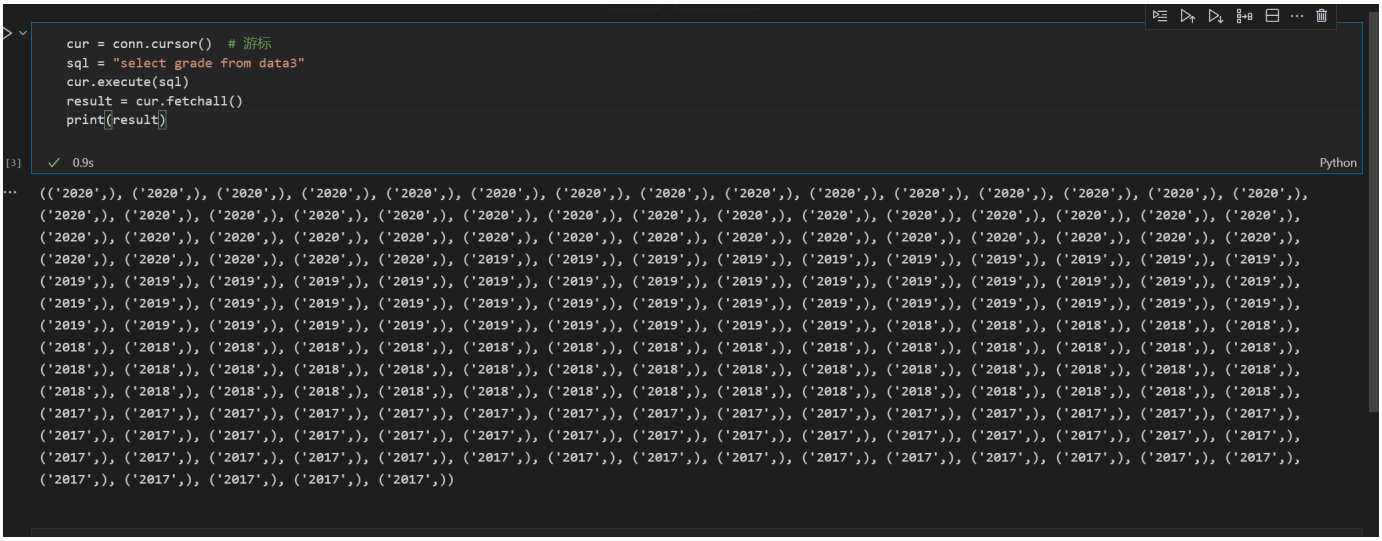
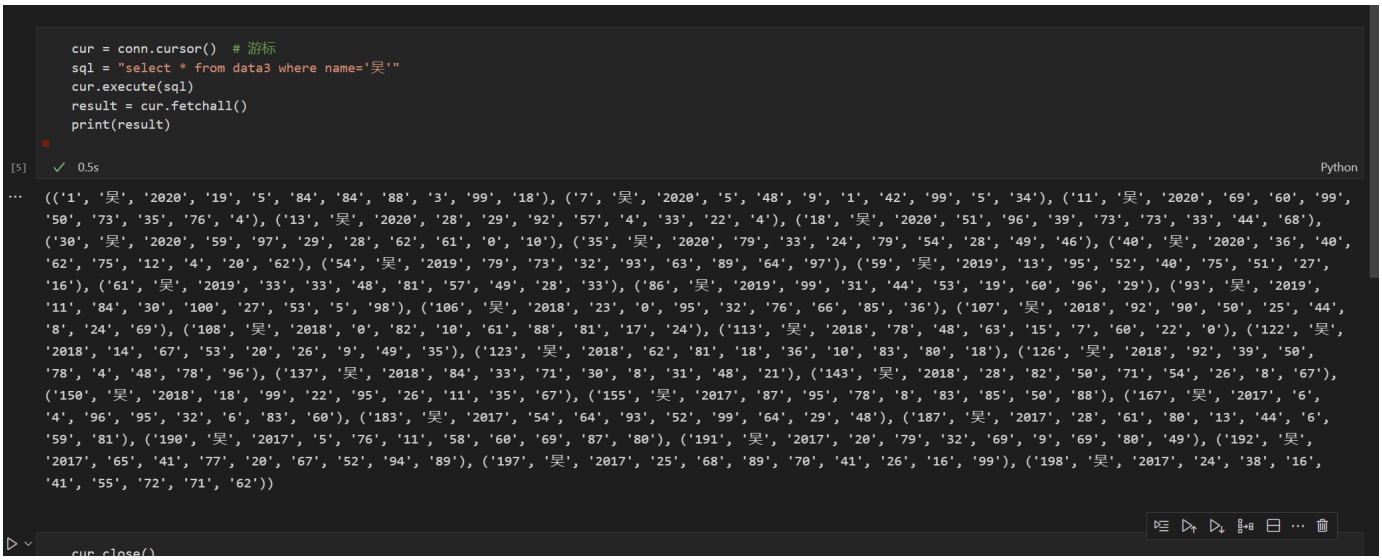
a、列查询




```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
                       db = "作业" , charset='utf8') ##连接
cur = conn.cursor()  # 游标
sql = "select grade from data3"
cur.execute(sql)
result = cur.fetchall()
print(result)
cur.close()
conn.close()
```

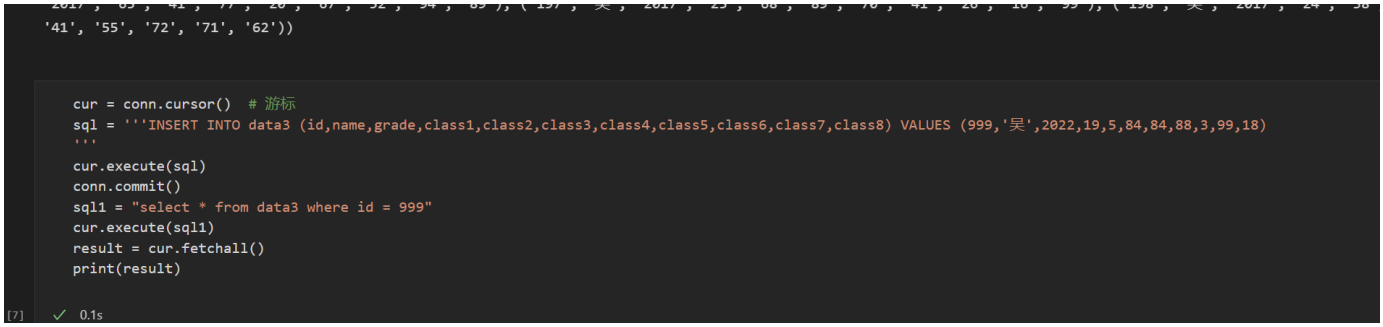
b、行查询




```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
                       db = "作业" , charset='utf8') ##连接
cur = conn.cursor()  # 游标
sql = "select * from data3 where name='吴'"
```

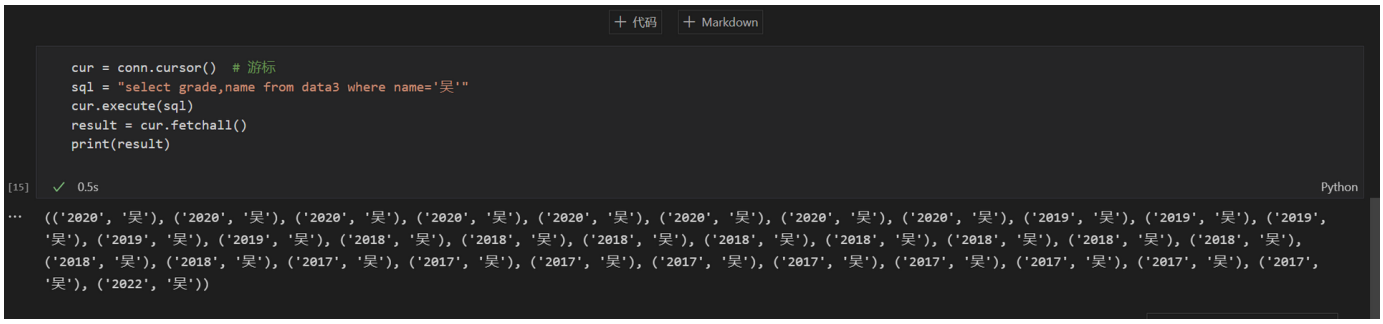
```
cur.execute(sql)
result = cur.fetchall()
print(result)
cur.close()
conn.close()
```

c、在表中添加一行数据




```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
                       db = "作业" , charset='utf8') ##连接
cur = conn.cursor()  # 游标
sql = '''INSERT INTO data3
(id,name,grade,class1,class2,class3,class4,class5,class6,class7,class8) VALUES
(999,'吴',2022,19,5,84,84,88,3,99,18)
'''
cur.execute(sql)
conn.commit()
sql1 = "select * from data3 where id = 999"
cur.execute(sql1)
result = cur.fetchall()
print(result)
cur.close()
conn.close()
```

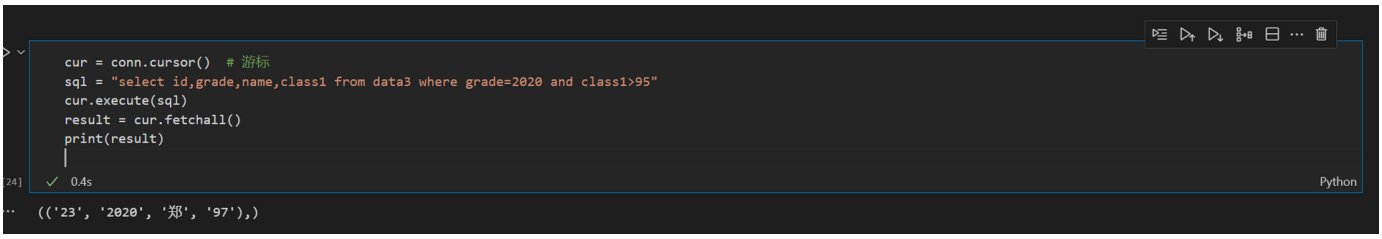
d、条件查询：查询name等于“吴”和列名等于“grade”的数据




```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
```

```
                        db = "作业" , charset='utf8') ##连接
cur = conn.cursor()  # 游标
sql = "select grade,name from data3 where name='吴'"
cur.execute(sql)
result = cur.fetchall()
print(result)
cur.close()
conn.close()
```

e、条件查询：查询2020级中class1的成绩大于95的学生的id和name




```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
                        db = "作业" , charset='utf8') ##连接
cur = conn.cursor()  # 游标
sql = "select id,grade,name,class1 from data3 where grade=2020 and class1>95"
cur.execute(sql)
result = cur.fetchall()
print(result)
cur.close()
conn.close()
```

f、计算2020级class1~class8所有科目的平均值


```
import random
u = int(input())
count = 2 *int(u)+1
o = 0
p = 0
while count:
 a = input("请出(石头/剪刀/布):")
 b = ["剪刀", "石头", "布"]  # 定义赢的列表
 win_list = [["石头", "剪刀"], ["剪刀", "布"], ["布", "石头"]]
```

```
# 计算机随机选择出
x = random.choice(b)
print("你出：", a)
print("计算机出：", x)
q = "平局"
w = "恭喜，你赢了"
e = "你输了"
if a in b:
 count -= 1
 if a == x:
   print(q)
 elif [a, x] in win_list:
   print(w)
   o += 1
 else:
   print(e)
   p += 1
else:
 print("输入错误")
print("你还剩余机会", count)
print(o, ":", p)
if o == int(u+1):
  print("玩家胜利")
  break
elif p == int(u)+1:
  print("电脑胜利")
  break
```