

74+戴一帆+211205102388

作业7

戴一帆

2022年4月21号

- 1. 创建data2表
- 2. 将data3.csv的表格导入到mysql中，使用python编写SQL语句
 - 导入data3
 - a、列查询
 - b、行查询
 - c、在表中添加一行数据
 - 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

1. 创建data2表

要求：

- 使用python连接SQL语句创建一个叫data2的表；
- 使用python连接SQL语句将数据插入到表data2中；

The screenshot shows the Navicat Premium interface. On the left, the 'Objects' tree shows a MySQL database named 'data2' with a table 'data2'. The main window displays the 'data2' table with 6 records. The columns are: id, name, sex, birth, department, and address. The records are: 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. The status bar at the bottom shows 'SELECT * FROM '作业'.data2' LIMIT 0,1000'.

```
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

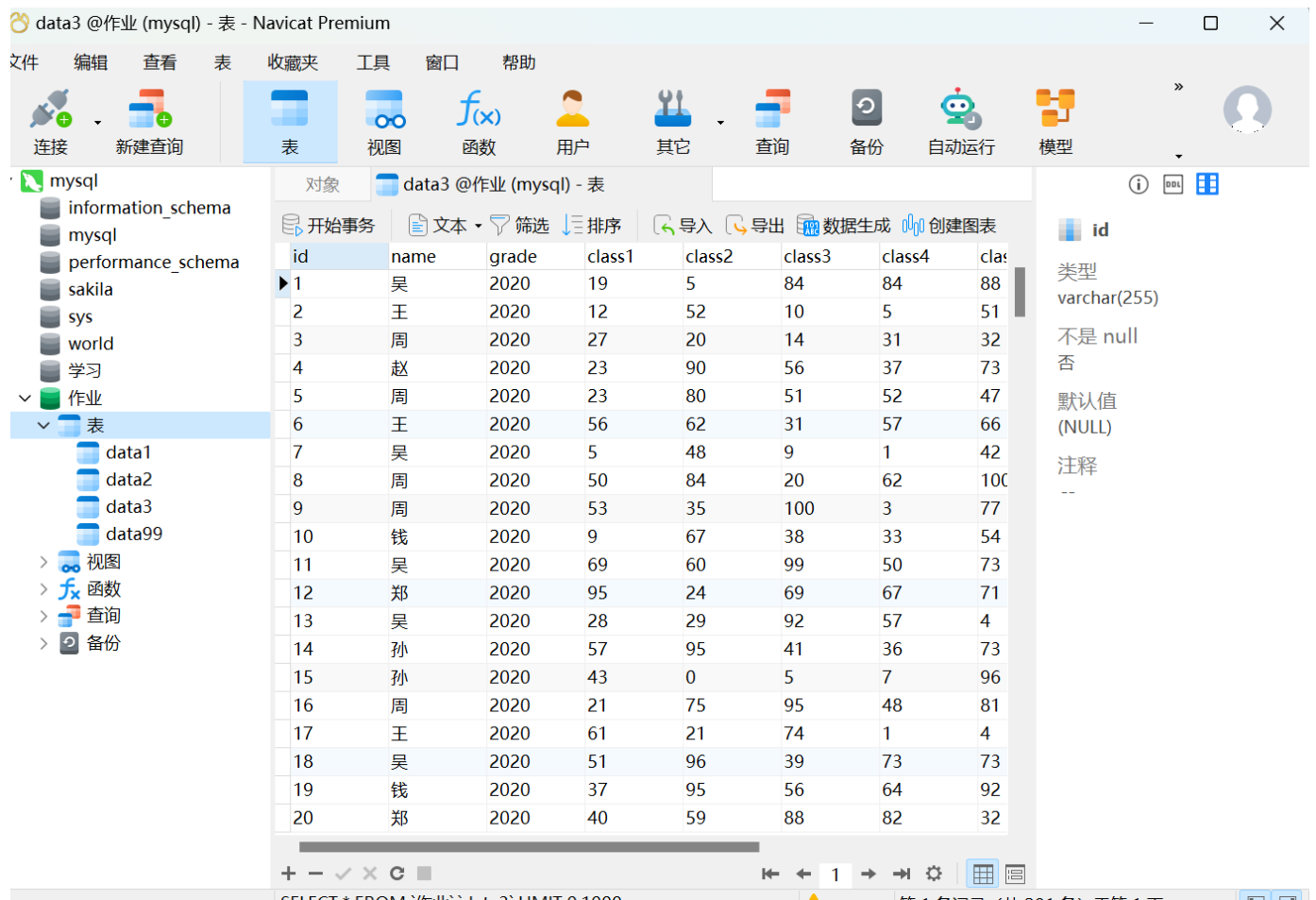
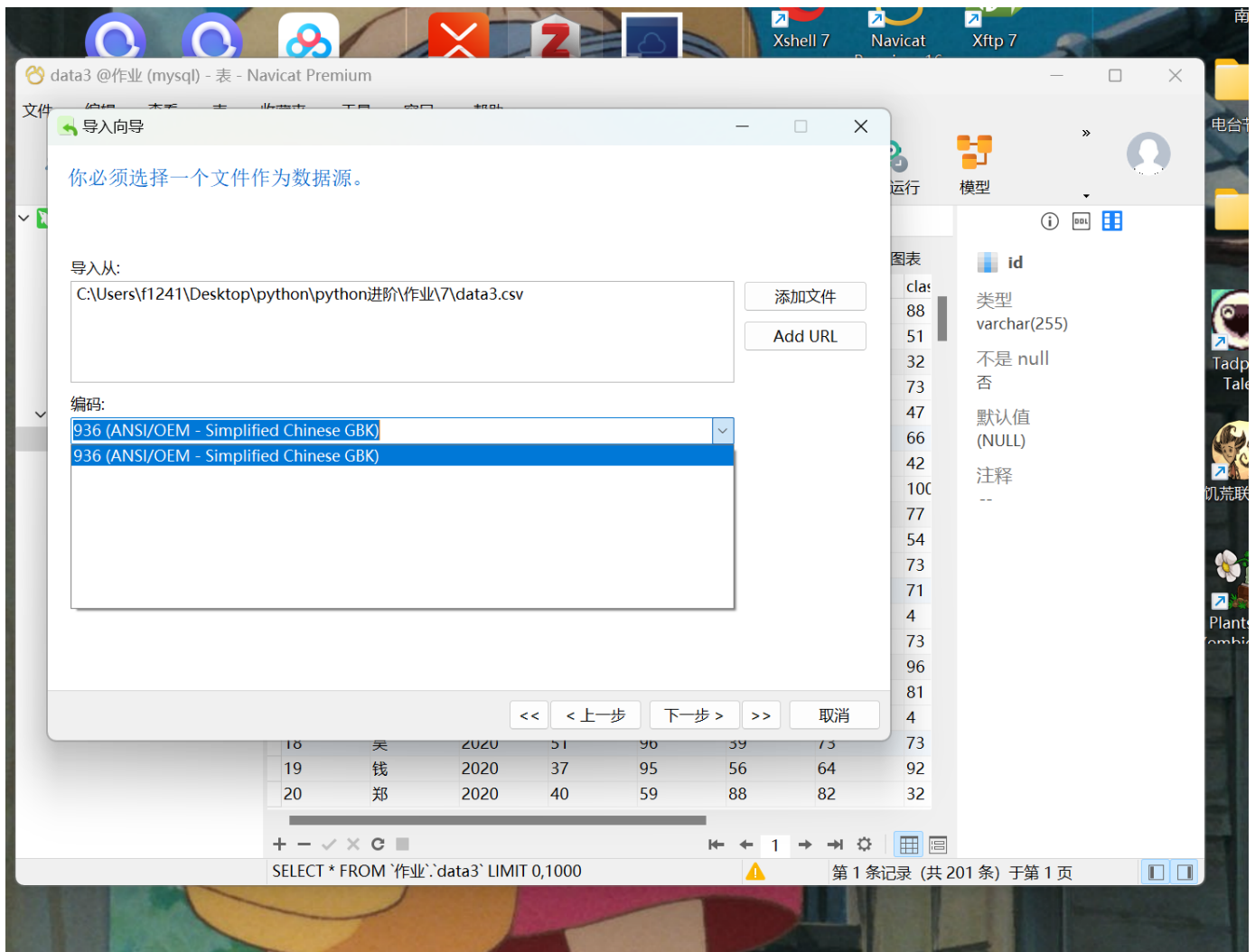
```
import pymysql
conn = pymysql.connect(host = "localhost", user = "root", password = "1024",
                        db = "作业", charset='utf8') ##连接
cur = conn.cursor() # 游标
sql = "select * from data2"
cur.execute(sql)
result2 = cur.fetchall()
print(result2)
cur.close() # 关闭游标
conn.close()# 退出连接
```

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



a、列查询

```
cur = conn.cursor() # 游标
sql = "select grade from data3"
cur.execute(sql)
result = cur.fetchall()
print(result)
```

```
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

```
cur = conn.cursor() # 游标
sql = "select * from data3 where name='吴'"
cur.execute(sql)
result = cur.fetchall()
print(result)
```

[5] ✓ 0.5s Python

```
... (('1', '吴', '2020', '19', '5', '84', '84', '88', '3', '99', '18'), ('7', '吴', '2020', '5', '48', '9', '1', '42', '99', '5', '34'), ('11', '吴', '2020', '69', '60', '99', '50', '73', '35', '76', '4'), ('13', '吴', '2020', '28', '29', '92', '57', '4', '33', '22', '4'), ('18', '吴', '2020', '51', '96', '39', '73', '73', '33', '44', '68'), ('30', '吴', '2020', '59', '97', '29', '28', '62', '61', '0', '10'), ('35', '吴', '2020', '79', '33', '24', '79', '54', '28', '49', '46'), ('40', '吴', '2020', '36', '40', '62', '75', '12', '4', '20', '62'), ('54', '吴', '2019', '79', '73', '32', '93', '63', '89', '64', '97'), ('59', '吴', '2019', '13', '95', '52', '40', '75', '51', '27', '16'), ('61', '吴', '2019', '33', '33', '48', '81', '57', '49', '28', '33'), ('86', '吴', '2019', '99', '31', '44', '53', '19', '60', '96', '29'), ('93', '吴', '2019', '11', '84', '30', '100', '27', '53', '5', '98'), ('106', '吴', '2018', '23', '0', '95', '32', '76', '66', '85', '36'), ('107', '吴', '2018', '92', '90', '50', '25', '44', '8', '24', '69'), ('108', '吴', '2018', '0', '82', '10', '61', '88', '81', '17', '24'), ('113', '吴', '2018', '78', '48', '63', '15', '7', '60', '22', '0'), ('122', '吴', '2018', '14', '67', '53', '20', '26', '9', '49', '35'), ('123', '吴', '2018', '62', '81', '18', '36', '10', '83', '80', '18'), ('126', '吴', '2018', '92', '39', '50', '78', '4', '48', '78', '96'), ('137', '吴', '2018', '84', '33', '71', '30', '8', '31', '48', '21'), ('143', '吴', '2018', '28', '82', '50', '71', '54', '26', '8', '67'), ('150', '吴', '2018', '18', '99', '22', '95', '26', '11', '35', '67'), ('155', '吴', '2017', '87', '95', '78', '8', '83', '85', '50', '88'), ('167', '吴', '2017', '6', '4', '96', '95', '32', '6', '83', '60'), ('183', '吴', '2017', '54', '64', '93', '52', '99', '64', '29', '48'), ('187', '吴', '2017', '28', '61', '80', '13', '44', '6', '59', '81'), ('190', '吴', '2017', '5', '76', '11', '58', '60', '69', '87', '80'), ('191', '吴', '2017', '20', '79', '32', '69', '9', '69', '80', '49'), ('192', '吴', '2017', '65', '41', '77', '28', '67', '52', '94', '89'), ('197', '吴', '2017', '25', '68', '89', '70', '41', '26', '16', '99'), ('198', '吴', '2017', '24', '38', '16', '41', '55', '72', '71', '62'))
```

```
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

```
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)
```

```
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

[illegible]

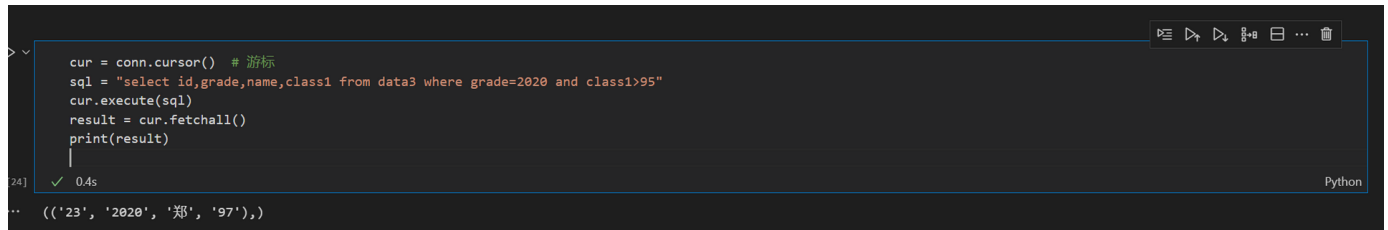
```
import pymysql
conn = pymysql.connect(host = "localhost" , user = "root" , password = "1024" ,
```

```

        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



```

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)

```

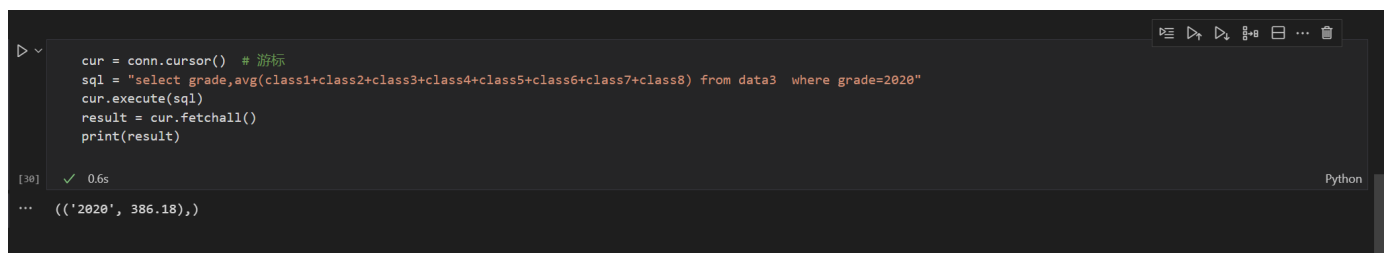
Output: (('23', '2020', '郑', '97'),)

```

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



```

cur = conn.cursor() # 游标
sql = "select grade,avg(class1+class2+class3+class4+class5+class6+class7+class8) from data3 where grade=2020"
cur.execute(sql)
result = cur.fetchall()
print(result)

```

Output: (('2020', 386.18),)

```

import random
user = int(input("次数"))
number = user
u = 0
r = 0
def robot_choice():
    return random.choice( ["剪刀", "石头", "布"])
while user > 0:
    user_1 = input("请出(石头/剪刀/布):")

```

```

robot = robot_choice()
if (user_1 == "石头" and robot == "剪刀") or (user_1 == "剪刀" and robot == "布")
or (user_1 == "布" and robot == "石头"):
    print("你出: ", user_1)
    print("电脑:" + robot)
    print("你赢了 ")
    u += 1

elif (user_1 == "石头" and robot == "石头") or (user_1 == "剪刀" and robot == "剪
刀") or (user_1 == "布" and robot == "布"):
    print("你出: ", user_1)
    print("电脑:" + robot)
    print("平局")
    u += 1
    r += 1

else:
    print("你出: ", user_1)
    print("电脑:" + robot)
    print("你输了")
    r += 1

user -= 1
if u == 2*number-1 or r == 2*number-1:
    break
print(u, ":", r)
if u > r :
    print("you win")
elif u==r:
    print("draw")
else:
    print("you loss")

```

```

... user -= 1
... if u == 2*number-1 or r == 2*number-1:
...     break
print(u, ":", r)
if u > r :
... print("you win")
elif u==r:
... print("draw")
else:
... print("you loss")

```

[31] ✓ 5.7s Python

```

... 你出: 剪刀
... 电脑:剪刀
... 平局
... 你出: 布
... 电脑:石头
... 你赢了
... 2 : 1
... you win

```