Day-3 Assignment A19-ธนิต เกตุแก้ว

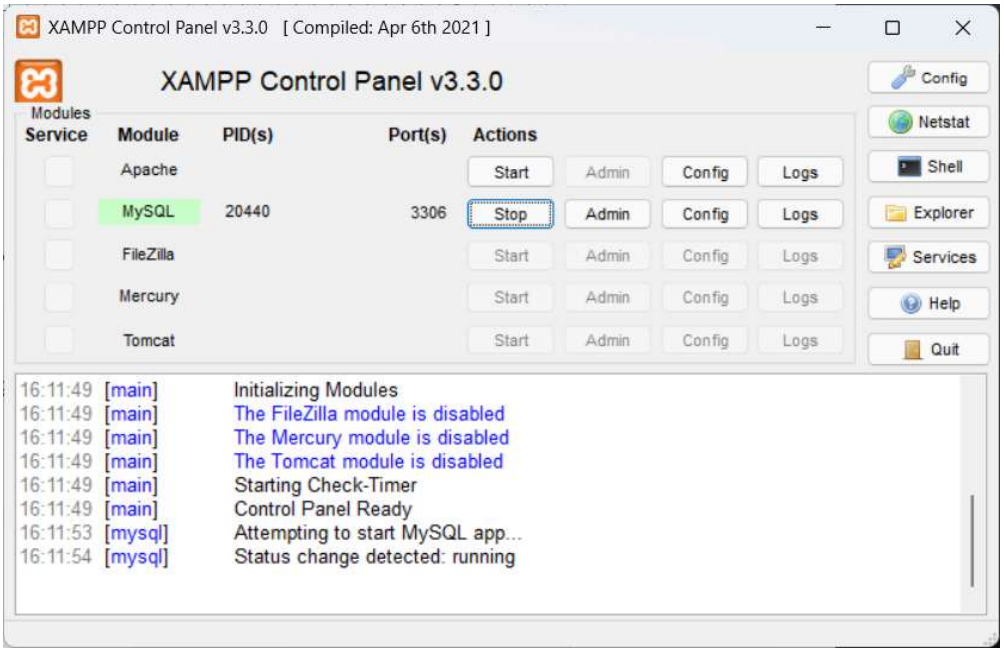
My github repository

```
https://github.com/tkeatkaew/data_engineer_training_psu
```

1) หน้าจอจาก Xampp, Compass แสดงว่าข้อมูลอยู่ใน MongoDB แล้ว 3 คะแนน

MySQL

Start MySQL Server.



30

Assignment

1. จงเขียนคำสั่งเพื่อสร้างฐานข้อมูลใหม่ชื่อ topic
2. จงเขียนคำสั่งเพื่อเรียกใช้ฐานข้อมูล topic แล้วสร้างตารางใหม่ชื่อ student ที่เก็บข้อมูล id ชนิด int และ name ชนิด varchar(50)
3. จงเขียนคำสั่งเพื่อเพิ่มข้อมูลจำนวนหนึ่งระเบียนลงในตาราง customer ของฐานข้อมูล lab ด้วยข้อมูล id = 9 ตามด้วย name เป็นชื่อภาษาอังกฤษของผู้ทดลอง (เช่น Kamon) และ credit เป็น 9999.9
4. จงเขียนคำสั่งเพื่อแสดงข้อมูลทั้งหมดของตาราง customer ของฐานข้อมูล lab
5. จงเขียนคำสั่งเพื่อเปลี่ยนแปลงข้อมูลหนึ่งระเบียนของตาราง customer ของฐานข้อมูล lab ที่มีค่า id = 2 โดยเปลี่ยนแปลงให้ค่าของ name เป็นชื่อภาษาอังกฤษของผู้ทดลอง (เช่น Kamon)

Connect MySQL using the command line.

Display all databases.

```
PowerShell 7.5.1
PS C:\Users\se-rumtl> d:
PS D:\> cd D:\DataEngineerTraining\day3\data_engineer_training_psu\day3
PS D:\DataEngineerTraining\day3\data_engineer_training_psu\day3> mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 8
Server version: 10.4.32-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| lab                |
| mysql              |
| performance_schema |
| phpmyadmin         |
| test               |
| topic              |
+--------------------+
7 rows in set (0.048 sec)

MariaDB [(none)]>
```

แสดง **lab DB** ที่สร้างขึ้นมาและผลของการที่ทำตาม slide: `C3-MySQL.pdf`

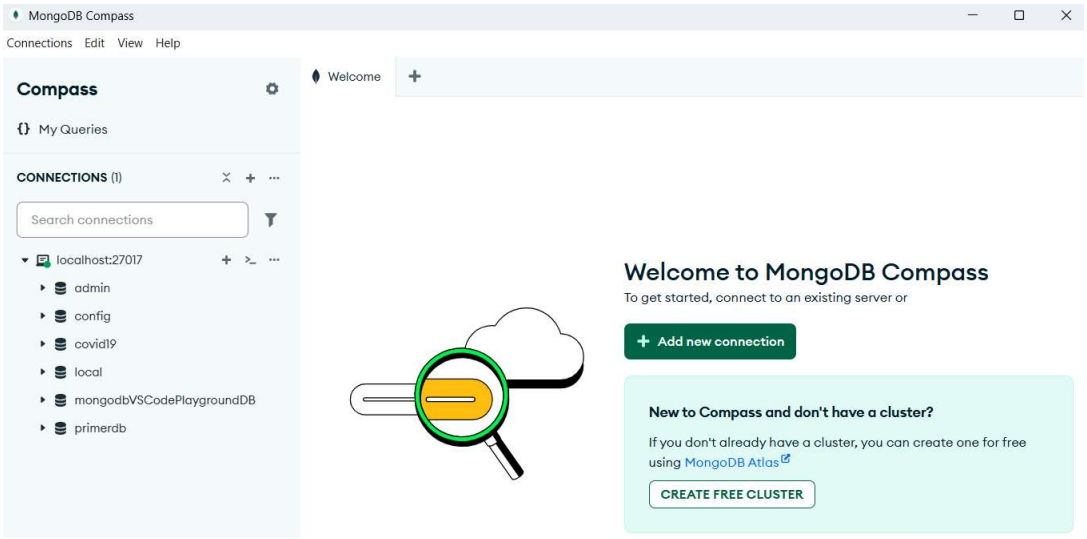
```
MariaDB [(none)]> use lab;
Database changed
MariaDB [lab]> show tables;
+---------------+
| Tables_in_lab |
+---------------+
| customer      |
+---------------+
1 row in set (0.001 sec)

MariaDB [lab]> select * from customer;
+----+-------------+----------+
| id | name        | credit   |
+----+-------------+----------+
|  1 | First Count | 10000.15 |
|  3 | Lek         | 50000.35 |
|  9 | Thanit      |   9999.9 |
+----+-------------+----------+
3 rows in set (0.053 sec)

MariaDB [lab]>
```

แสดง **topic DB**

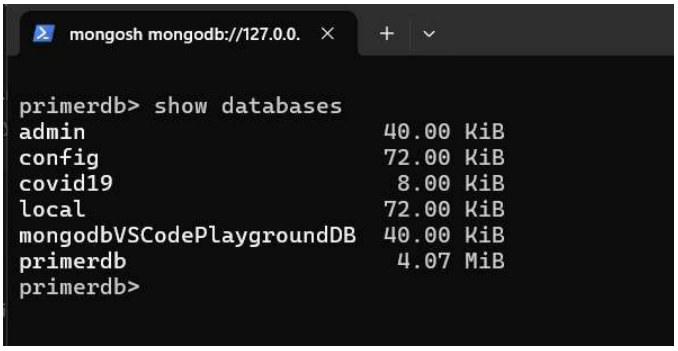
```
MariaDB [lab]> use topic;
Database changed
MariaDB [topic]> show tables;
+-----------------+
| Tables_in_topic |
+-----------------+
| student         |
+-----------------+
1 row in set (0.001 sec)

MariaDB [topic]> select * from student;
+----+--------+--------+
| id | name   | credit |
+----+--------+--------+
|  9 | Thanit | 9999.9 |
+----+--------+--------+
1 row in set (0.004 sec)

MariaDB [topic]>
```

MongoDB

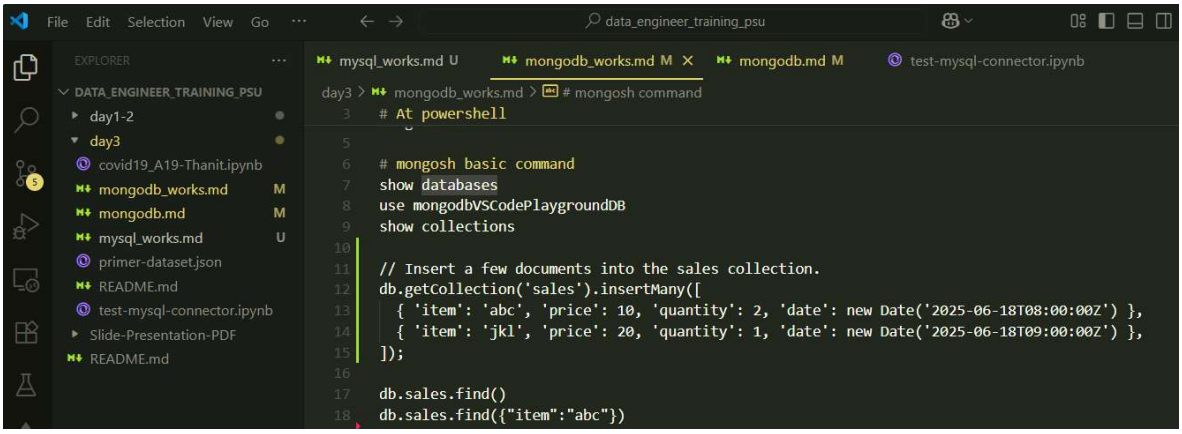
Connect to MongoDB and show all existing databases and my import data.



Connect MongoDB using the command line.
Display all databases.



From my github repository, these are my related command lines which used for this lab,



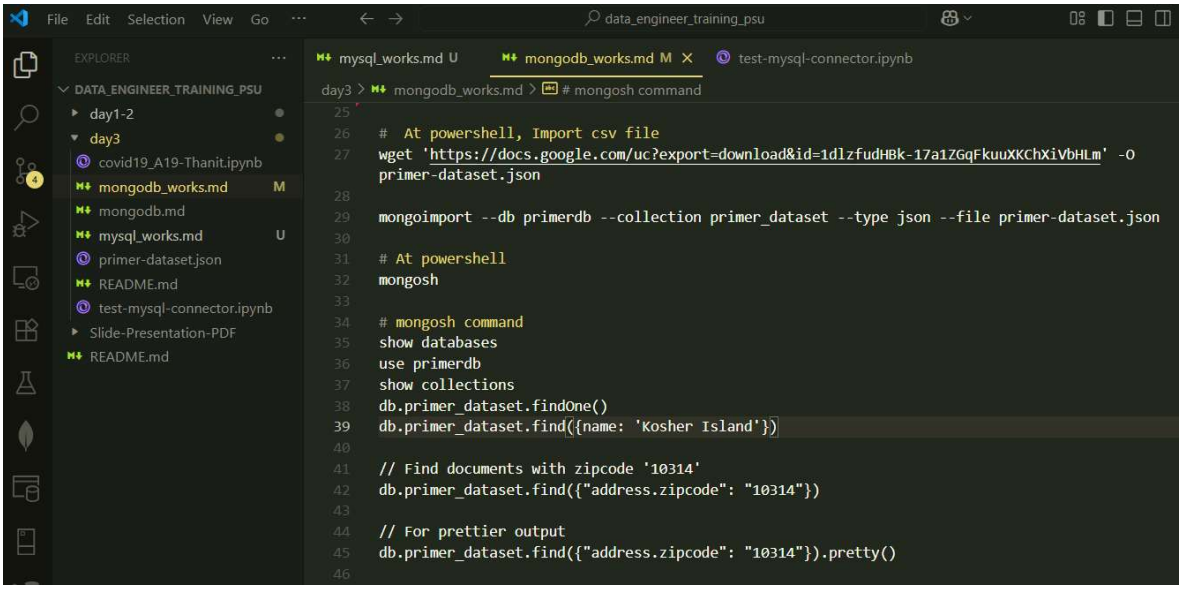
```
switched to db mongodbVSCodePlaygroundDB
mongodbVSCodePlaygroundDB> db.getCollection('sales').insertMany([
...    { 'item': 'abc', 'price': 10, 'quantity': 2, 'date': new Date('2025-06-18T08:00:00Z') },
...    { 'item': 'jkl', 'price': 20, 'quantity': 1, 'date': new Date('2025-06-18T09:00:00Z') },
... ]);
...
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('6852a759a0fb583cbd50eb67'),
    '1': ObjectId('6852a759a0fb583cbd50eb68')
  }
}
```

```
primerdb> use mongodbVSCodePlaygroundDB
switched to db mongodbVSCodePlaygroundDB
mongodbVSCodePlaygroundDB> db.getCollection('sales').insertMany([
...    { 'item': 'abc', 'price': 10, 'quantity': 2, 'date': new Date('2025-06-18T08:00:00Z') },
...    { 'item': 'jkl', 'price': 20, 'quantity': 1, 'date': new Date('2025-06-18T09:00:00Z') },
... ]);
...
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('6852a759a0fb583cbd50eb67'),
    '1': ObjectId('6852a759a0fb583cbd50eb68')
  }
}
```

Then, test import with csv file

```
wget
'https://docs.google.com/uc?export=download&id=1dlzfudHBk-17a1ZGqFkuuXKChXiV
bHLm' -O primer-dataset.json

mongoimport --db primerdb --collection primer_dataset --type json --file
primer-dataset.json
```

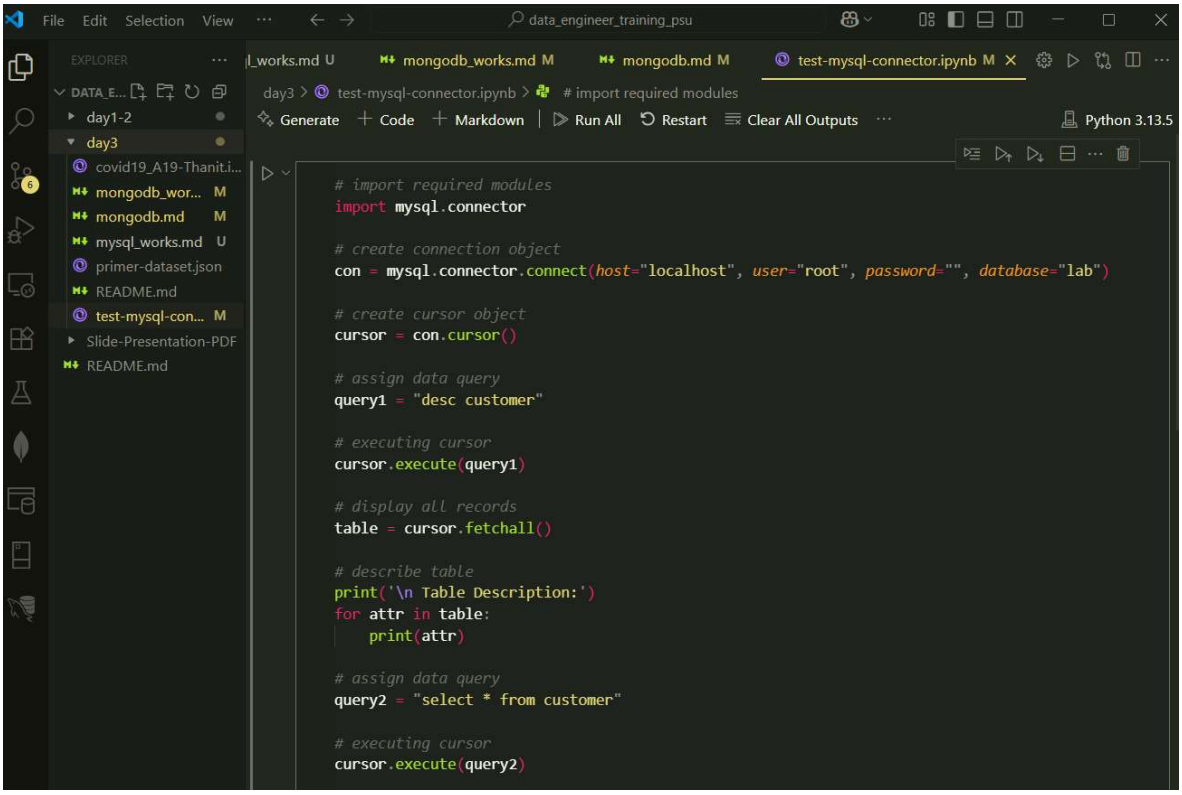
From my github repository, these are my related command lines which used for this lab,

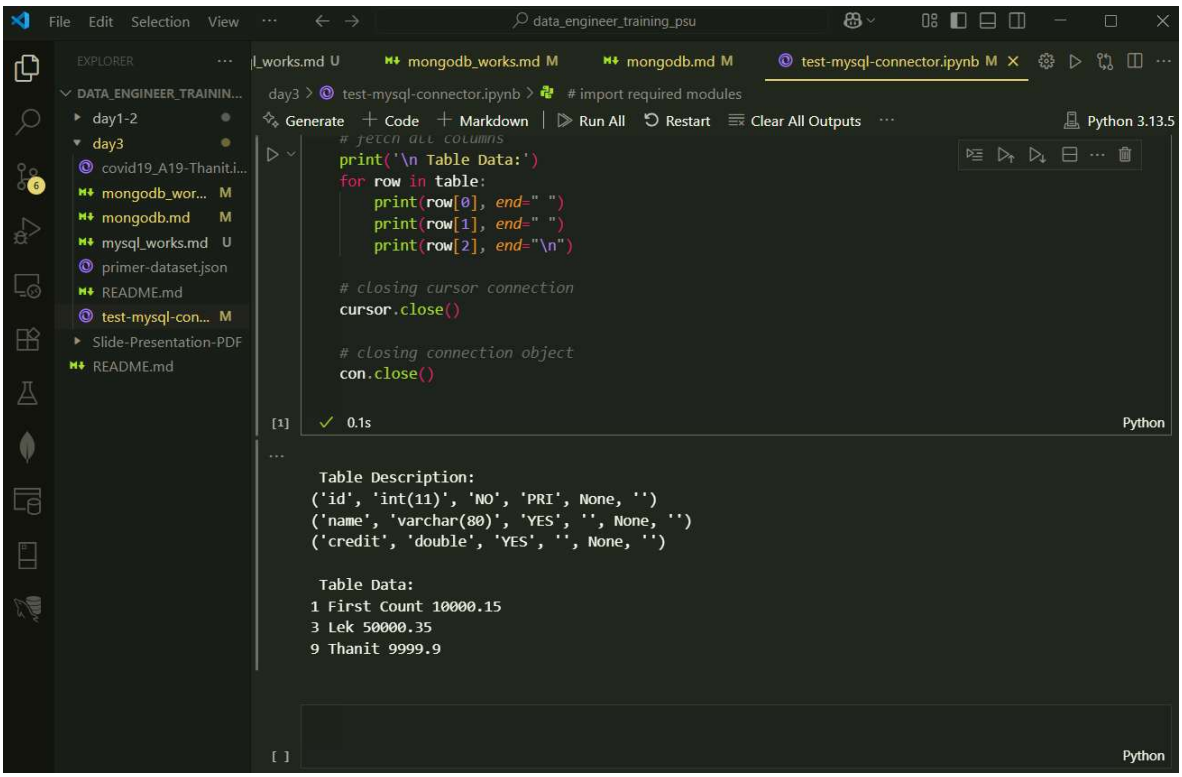


```
primerdb> show collections
primer_dataset
primerdb> db.primer_dataset.findOne()
{
  _id: ObjectId('685277cf01576891627ab8cb'),
  address: {
    building: '2206',
    coord: [ -74.1377286, 40.6119572 ],
    street: 'Victory Boulevard',
    zipcode: '10314'
  },
  borough: 'Staten Island',
  cuisine: 'Jewish/Kosher',
  grades: [
    { date: ISODate('2014-10-06T00:00:00.000Z'), grade: 'A', score: 9 },
    {
      date: ISODate('2014-05-20T00:00:00.000Z'),
      grade: 'A',
      score: 12
    },
    {
      date: ISODate('2013-04-04T00:00:00.000Z'),
      grade: 'A',
      score: 12
    },
    { date: ISODate('2012-01-24T00:00:00.000Z'), grade: 'A', score: 9 }
  ],
  name: 'Kosher Island',
  restaurant_id: '40356442'
}
primerdb>
```

2) หน้าจอดึงข้อมูลได้ด้วย sql-connector หรือ pymongo 4 คะแนน

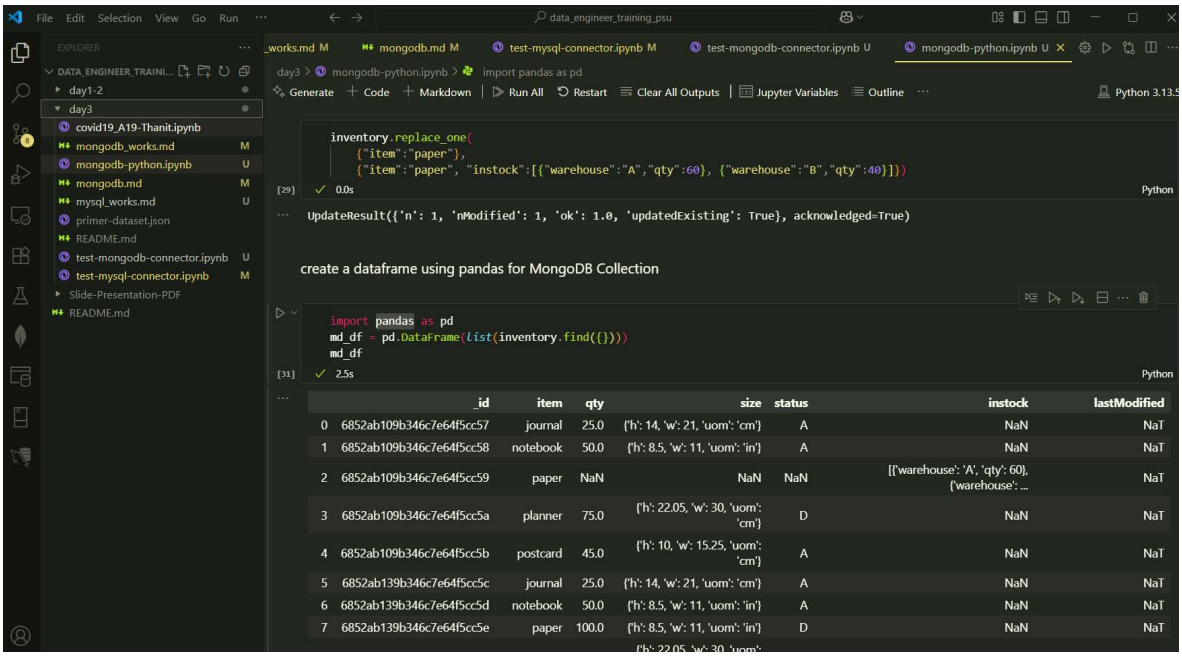
Connect to MySQL using Python





Connect to MongoDB using Python

Final screen of original `mongodb-python.ipynb` , when connect python to MongoDB and work with pandas



	_id	item	qty	size	status	instock	lastModified
0	6852ab109b346c7e64f5cc57	journal	25.0	{'h': 14, 'w': 21, 'uom': 'cm'}	A	NaN	NaT
1	6852ab109b346c7e64f5cc58	notebook	50.0	{'h': 8.5, 'w': 11, 'uom': 'in'}	A	NaN	NaT
2	6852ab109b346c7e64f5cc59	paper	NaN	NaN	NaN	[{'warehouse': 'A', 'qty': 60}, {'warehouse': ...	NaT
3	6852ab109b346c7e64f5cc5a	planner	75.0	{'h': 22.05, 'w': 30, 'uom': 'cm'}	D	NaN	NaT
4	6852ab109b346c7e64f5cc5b	postcard	45.0	{'h': 10, 'w': 15.25, 'uom': 'cm'}	A	NaN	NaT
5	6852ab139b346c7e64f5cc5c	journal	25.0	{'h': 14, 'w': 21, 'uom': 'cm'}	A	NaN	NaT
6	6852ab139b346c7e64f5cc5d	notebook	50.0	{'h': 8.5, 'w': 11, 'uom': 'in'}	A	NaN	NaT
7	6852ab139b346c7e64f5cc5e	paper	100.0	{'h': 8.5, 'w': 11, 'uom': 'in'}	D	NaN	NaT

Some results of its data.

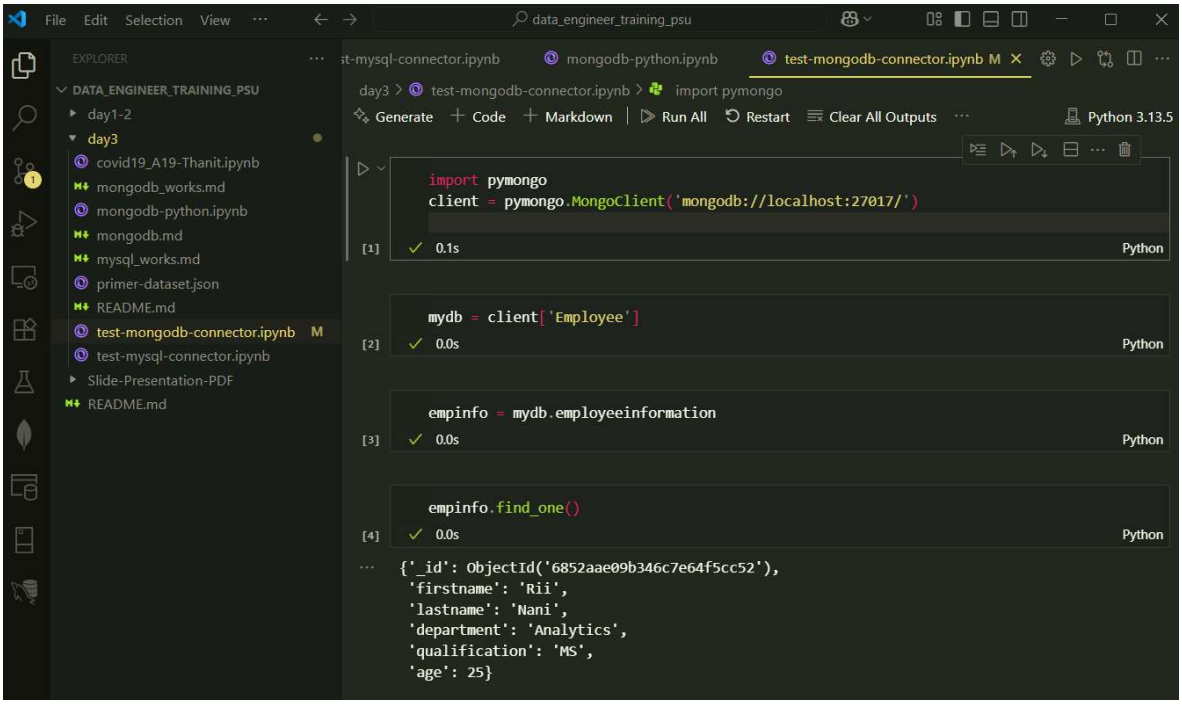
```
mongodbVSCodePlaygroundDB> show databases
Employee                144.00 KiB
admin                    40.00 KiB
config                  108.00 KiB
covid19                   8.00 KiB
local                    72.00 KiB
mongodbVSCodePlaygroundDB   72.00 KiB
primerdb                  4.07 MiB
mongodbVSCodePlaygroundDB>
```

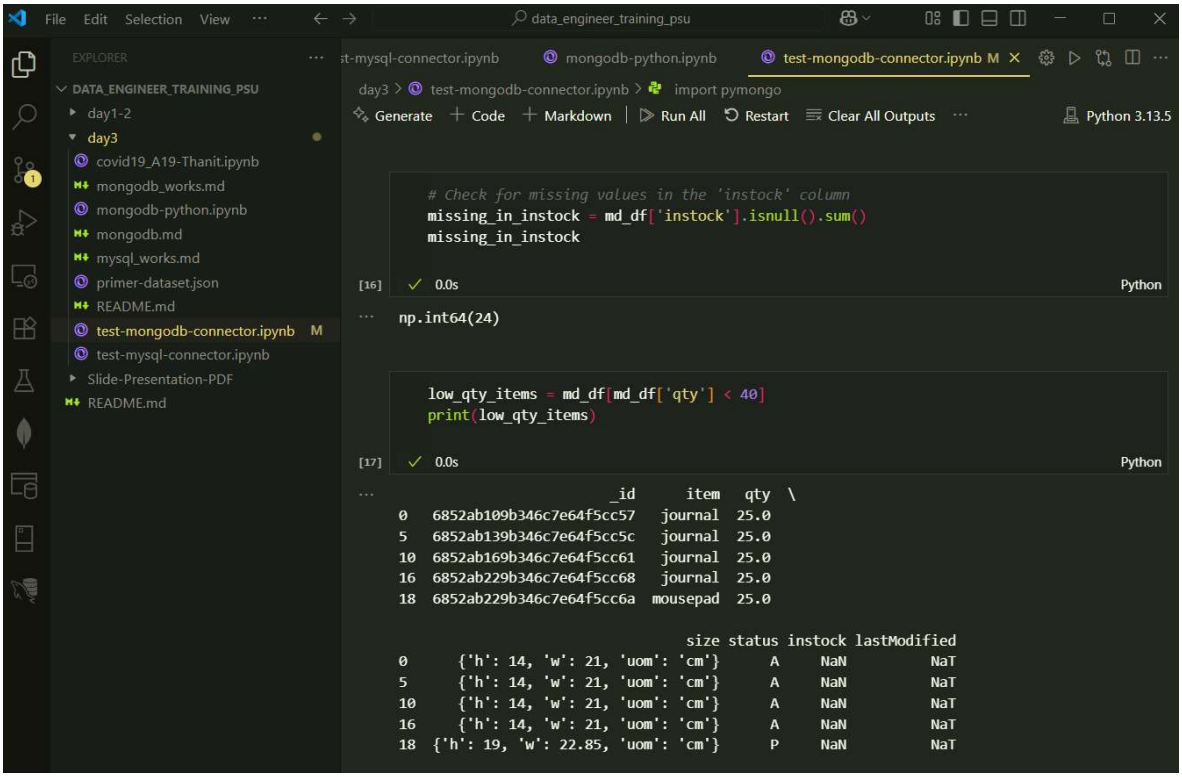
```
mongosh mongodb://127.0.0.

Employee> show collections
employeeinformation
inventory
Employee> db.employeeinformation.findOne()
{
  _id: ObjectId('6852aae09b346c7e64f5cc52'),
  firstname: 'Rii',
  lastname: 'Nani',
  department: 'Analytics',
  qualification: 'MS',
  age: 25
}
Employee> db.employeeinformation.find({'firstname':'Olive'})
[
  {
    _id: ObjectId('6852aaea9b346c7e64f5cc55'),
    firstname: 'Olive',
    lastname: 'Sen',
    department: 'Analytics',
    qualification: 'PhD',
    age: 34
  }
]
Employee>
```

3) หน้าจอแสดงการประมวลผลด้วย Pandas เช่น แสดงข้อมูลเฉพาะจังหวัด หรือวันที่ที่ต้องการ 3 คะแนน

My Code here:

```
https://github.com/tkeatkaew/data_engineer_training_psu/blob/main/day3/test-mongodb-connector.ipynb
```





Thank you.