

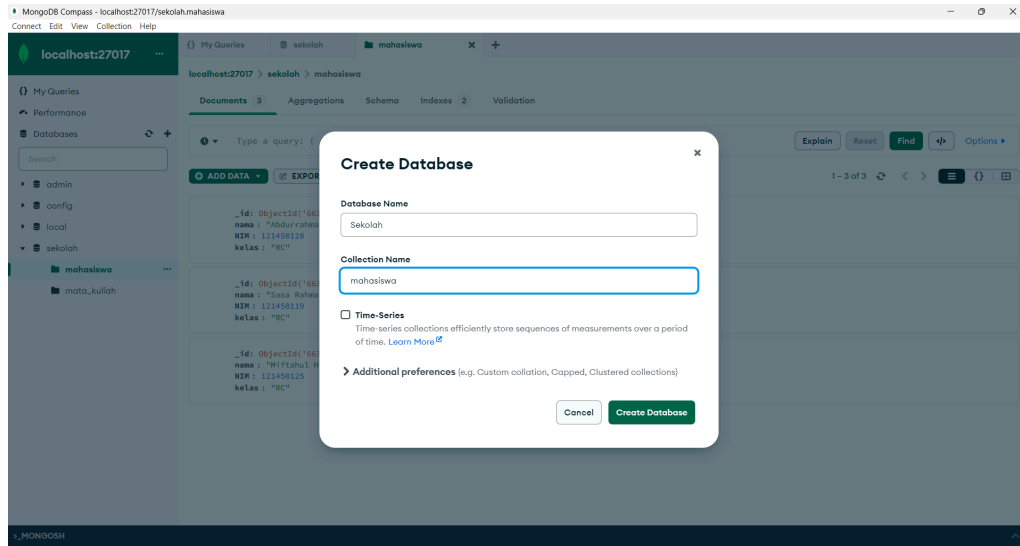
Nama : Abdurrahman Al-atsary

NIM : 121450128

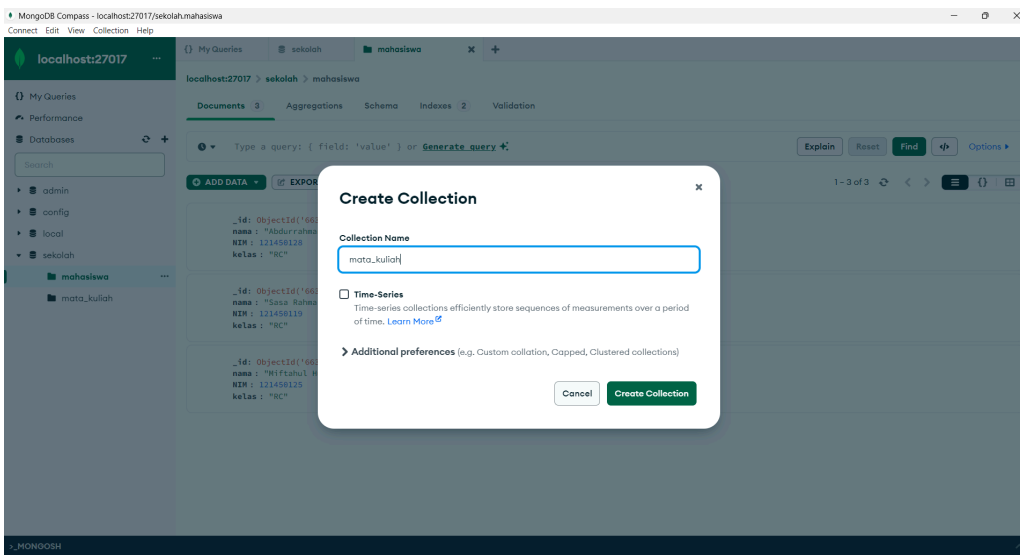
Kelas : RA

SS Code dan Ouput Tugas Praktikum

Membuat database dan collection baru bernama mahasiswa

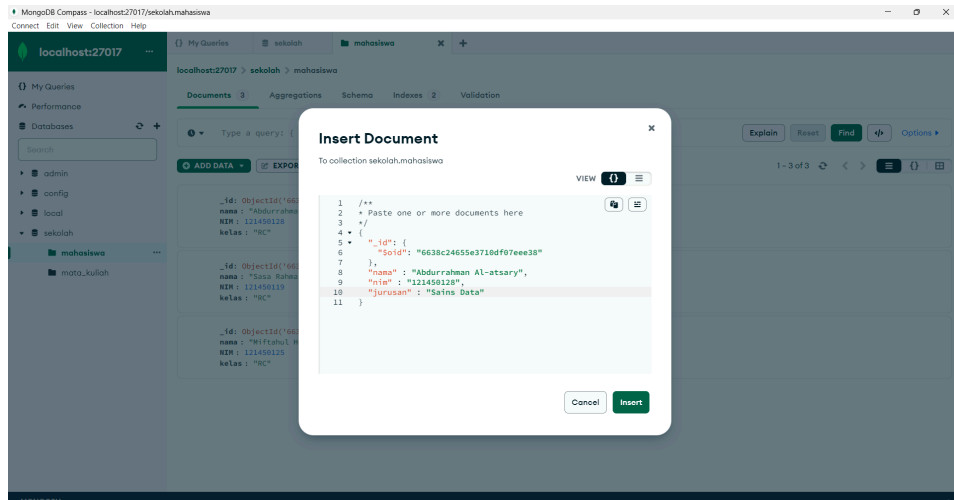


Membuat collection bernama mata_kuliah

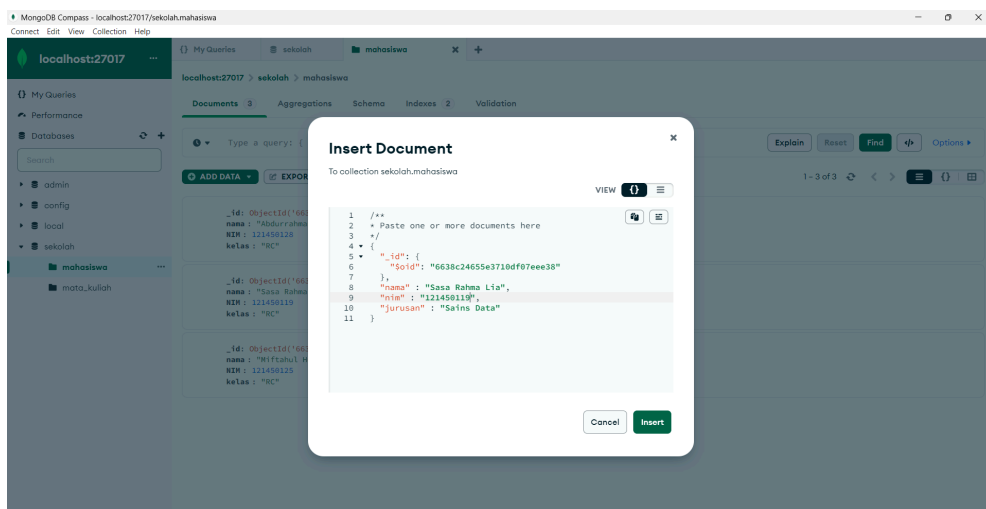


Operasi CRUD

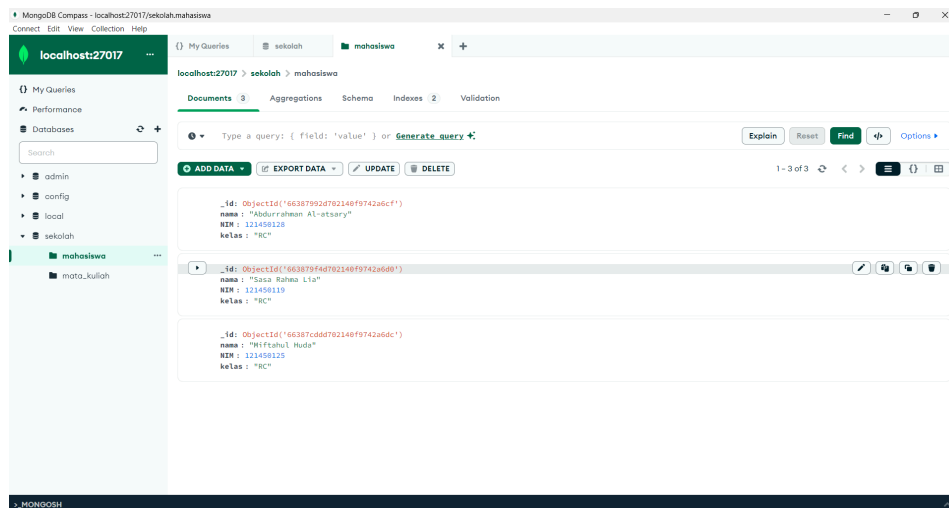
- **Create (Membuat data)**



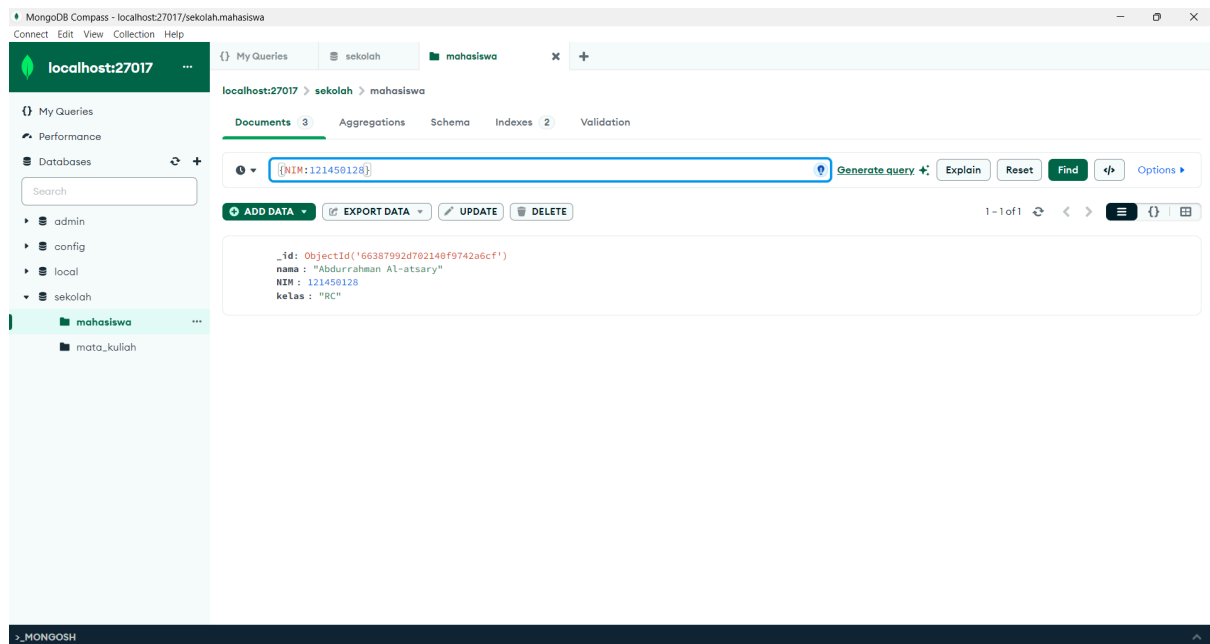
Sasa



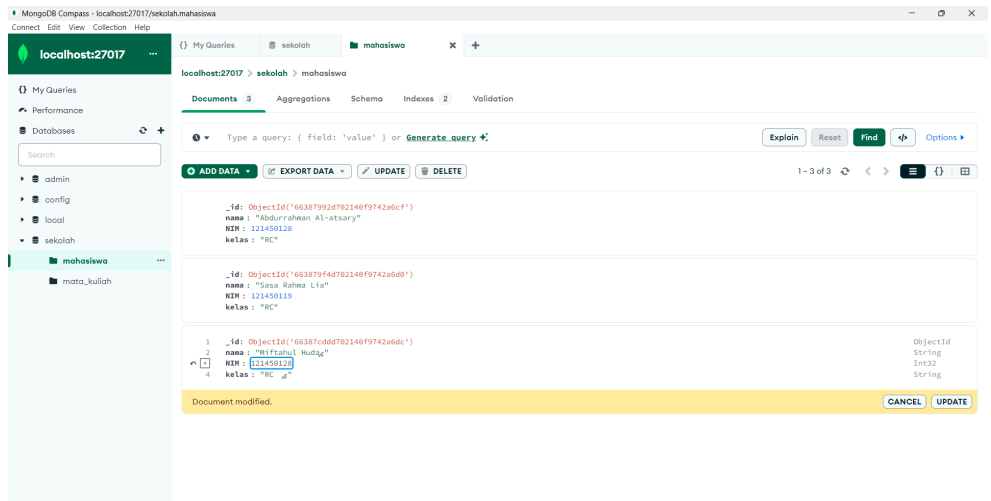
Melihat hasil dari penambahan beberapa data



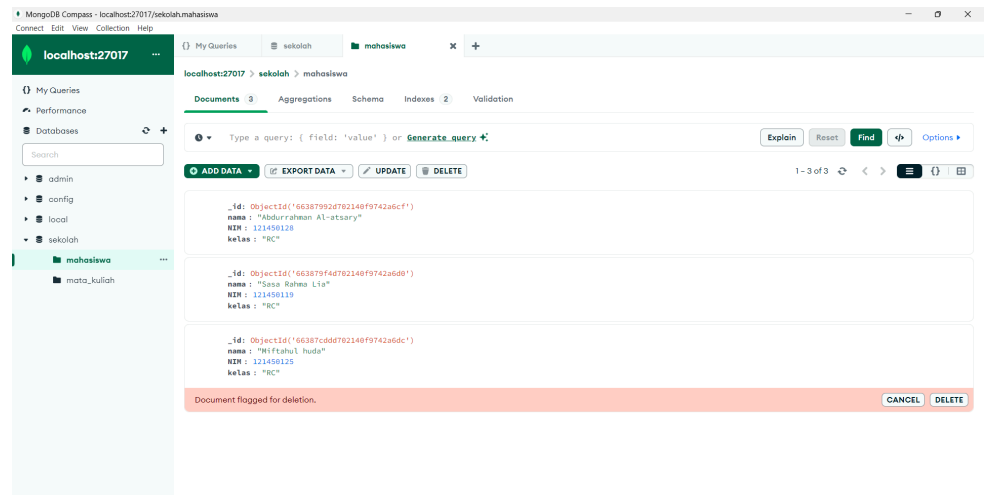
READ (Membaca Data)



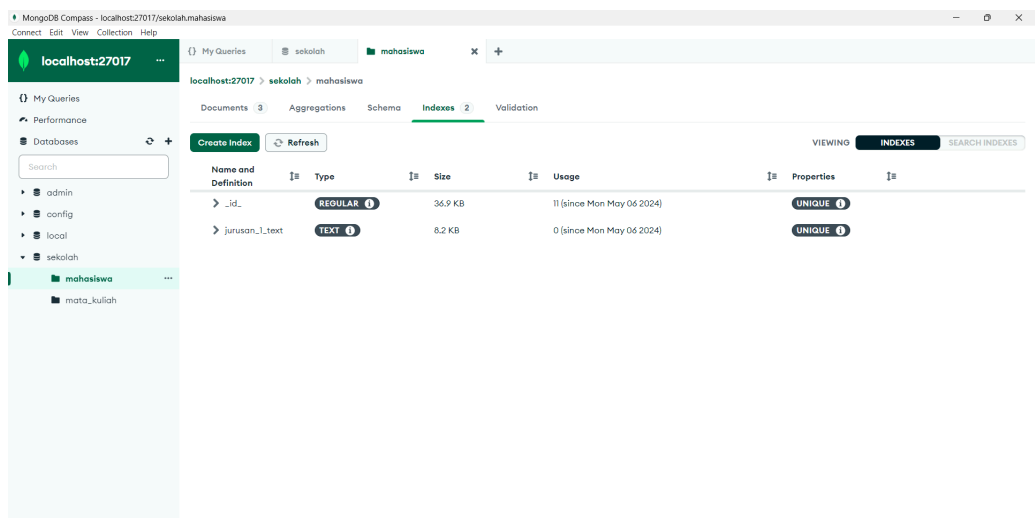
Update (Mengubah data)



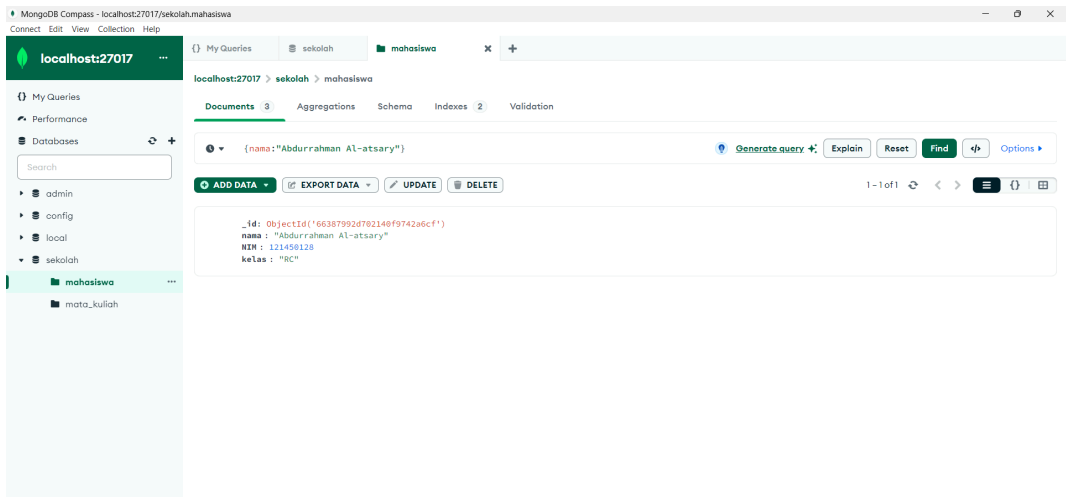
Delete (Menghapus Data)



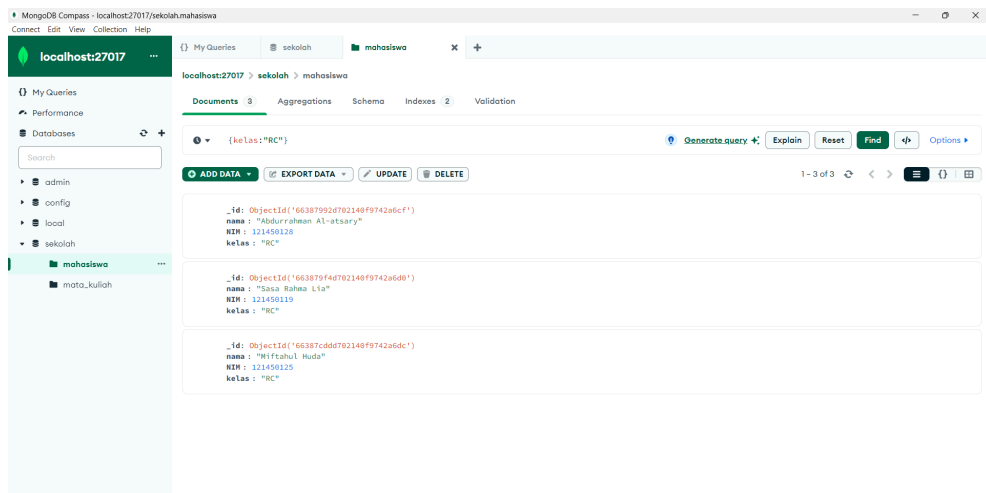
Menambahkan Index



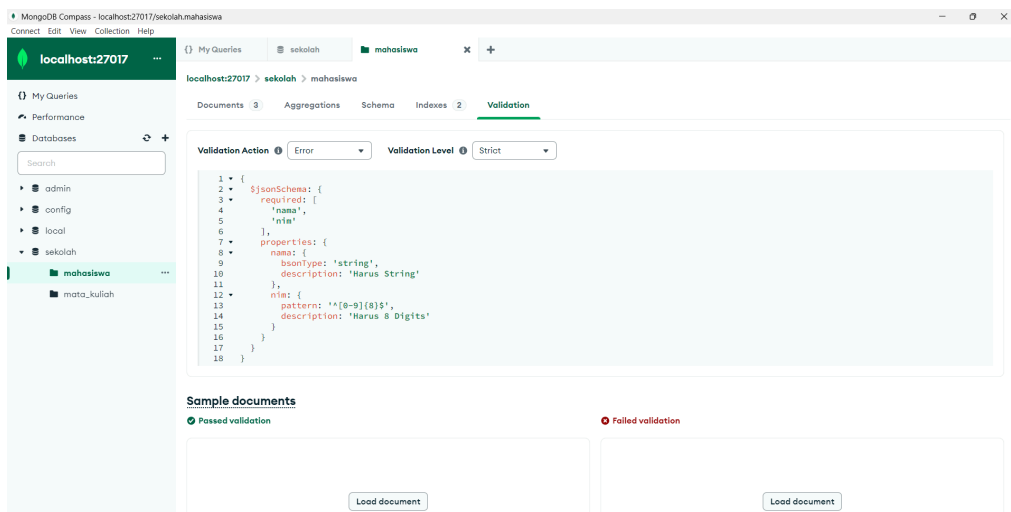
Filter berdasarkan nama

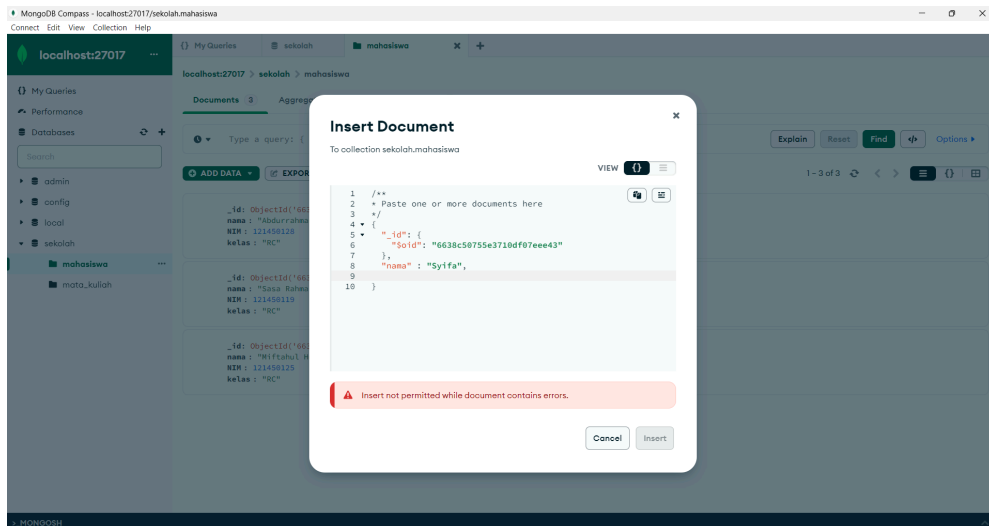


Filter berdasarkan kelas



Data Validation





Dengan menggunakan Python dan pymango

Instalasi pymango sebagai library yang digunakan

```
TERMINAL  PROBLEMS  OUTPUT  DEBUG CONSOLE  PORTS  GITLENS  SQL CONSOLE
bash: ng: command not found

ACER@Khirtz MINGW64 D:/Microsoft VS Code (main)
• $ pip install pymango
Collecting pymango
  Downloading pymango-0.1.1.tar.gz (2.7 kB)
  Requirement already satisfied: urllib3<3,>=1.21.1 in d:\anaconda\envs\ml\lib\site-packages (from requests>=2.4.3->pymango) (1.26.18)
  Requirement already satisfied: certifi>=2017.4.17 in d:\anaconda\envs\ml\lib\site-packages (from requests>=2.4.3->pymango) (2024.2.2)
  Building wheels for collected packages: pymango
  Building wheel for pymango (setup.py) ... done
  Created wheel for pymango: filename=pymango-0.1.1-py3-none-any.whl size=4048 sha256=f328320464d4ea8affbe2d5e7d25c12fcb7db8d0567be4c09154b44b84a6a13
  Stored in directory: c:\users\acer\appdata\local\pip\cache\wheels\ba\c2\3d\8f72cb302f6170a9fca8f98f6b34562b816aa7fde8fb5e5f10
  Successfully built pymango
  Installing collected packages: pymango
  Successfully installed pymango-0.1.1
```

Menghubungkan ke Server MongoDB

```
connect-mongodb.py U X
Modul-4 (MongoDB) > connect-mongodb.py > ...
1  import pymongo
2
3  client = pymongo.MongoClient("mongodb://localhost:27017")
4
5  # Pilih database yang akan digunakan
6  my_db = client["sekolah"]
7
8  print("mongodb telah terhubung")
9
10
11
12
13
...
TERMINAL  PROBLEMS  OUTPUT  DEBUG CONSOLE  PORTS  GITLENS  SQL CONSOLE
ACER@Khirtz MINGW64 D:/Microsoft VS Code (main)
• $ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\connect-mongodb.py"
mongodb telah terhubung
```

Menjalankan Oprasi CRUD

+ Read (Membaca data)

```
connect-mongodb.py U read.py U create.py U
Modul-4 (MongoDB) > read.py > [0] i
1 import pymongo
2
3 client = pymongo.MongoClient("mongodb://localhost:27017")
4
5 # Pilih database yang akan digunakan
6 my_db = client["sekolah"]
7
8 mycol = my_db["mahasiswa"]
9
10 # Membaca data full
11 for i in mycol.find():
12     print(i)
```

bash: ng: command not found

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```
$ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\read.py"
{'_id': ObjectId('66387992d702140f9742a6cf'), 'nama': 'Abdurrahman Al-atsary', 'NIM': 121450128, 'kelas': 'RC'}
{'_id': ObjectId('663879f4d702140f9742a6d0'), 'nama': 'Sasa Rahma Lia', 'NIM': 121450119, 'kelas': 'RC'}
{'_id': ObjectId('66387cdd702140f9742a6dc'), 'nama': 'Miftahul Huda', 'NIM': 121450125, 'kelas': 'RC'}
```

+ Create (Membuat data)

```
connect-mongodb.py U read.py U create.py U
Modul-4 (MongoDB) > create.py > ...
1 import pymongo
2
3 client = pymongo.MongoClient("mongodb://localhost:27017")
4
5 # Pilih database yang akan digunakan
6 my_db = client["sekolah"]
7
8 mycol = my_db["mahasiswa"]
9
10 mydict = {
11     "nama" : "Syifa",
12     "nim" : 121450113,
13     "kelas" : "RC"
14 }
15
16 x = mycol.insert_one(mydict)
17 print(x.inserted_id)
18
19 for i in mycol.find():
20     print(i)
```

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```
$ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\create.py"
6638cb6e216ab6fa556bbc38
{'_id': ObjectId('66387992d702140f9742a6cf'), 'nama': 'Abdurrahman Al-atsary', 'NIM': 121450128, 'kelas': 'RC'}
{'_id': ObjectId('663879f4d702140f9742a6d0'), 'nama': 'Sasa Rahma Lia', 'NIM': 121450119, 'kelas': 'RC'}
{'_id': ObjectId('66387cdd702140f9742a6dc'), 'nama': 'Miftahul Huda', 'NIM': 121450125, 'kelas': 'RC'}
{'_id': ObjectId('6638cb6e216ab6fa556bbc38'), 'nama': 'Syifa', 'nim': 121450113, 'kelas': 'RC'}
{'_id': ObjectId('6638cb6e216ab6fa556bbc38'), 'nama': 'Syifa', 'nim': 121450113, 'kelas': 'RC'}
```

+ Update (Mengubah Data)


```
connect-mongodb.py U read.py U create.py U update.py U delete.py U
Modul-4 (MongoDB) > update.py > ...
1 import pymongo
2
3 client = pymongo.MongoClient("mongodb://localhost:27017")
4
5 # Pilih database yang akan digunakan
6 my_db = client["sekolah"]
7
8 mycol = my_db["mahasiswa"]
9
10 myquery = {"nim" : 121450113}
11 newvalues = {"$set" : {"kelas" : "RB"}}
12 mycol.update_one(myquery, newvalues)
13
14
15 for x in mycol.find():
16     print(x)
```

{'_id': ObjectId('6638cb6e216ab6fa556bbc38'), 'nama': 'Syifa', 'nim': 121450113, 'kelas': 'RC'}

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```
$ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\update.py"
{'_id': ObjectId('66387992d702140f9742a6cf'), 'nama': 'Abdurrahman Al-atsary', 'NIM': 121450128, 'kelas': 'RC'}
{'_id': ObjectId('663879f4d702140f9742a6d0'), 'nama': 'Sasa Rahma Lia', 'NIM': 121450119, 'kelas': 'RC'}
{'_id': ObjectId('66387cdd702140f9742a6dc'), 'nama': 'Miftahul Huda', 'NIM': 121450125, 'kelas': 'RC'}
{'_id': ObjectId('6638cb6e216ab6fa556bbc38'), 'nama': 'Syifa', 'nim': 121450113, 'kelas': 'RB'}
```

+ Delete (Menghapus Data)



```
connect-mongodb.py U read.py U create.py U update.py U delete.py U X
Modul-4 (MongoDB) > delete.py > ...
1 import pymongo
2
3 client = pymongo.MongoClient("mongodb://localhost:27017")
4
5 # Pilih database yang akan digunakan
6 my_db = client["sekolah"]
7
8 mycol = my_db["mahasiswa"]
9
10 myquery = {"nama" : "Syifa"}
11 mycol.delete_one(myquery)
12
13
14 for i in mycol.find():
15     print(i)
```

```
ACER@Khirtz MINGW64 D:/Microsoft VS Code (main)
• $ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\delete.py"
{'_id': ObjectId('66387992d702140f9742a6cf'), 'nama': 'Abdurrahman Al-atsary', 'NIM': 121450128, 'kelas': 'RC'}
{'_id': ObjectId('663879f4d702140f9742a6d0'), 'nama': 'Sasa Rahma Lia', 'NIM': 121450119, 'kelas': 'RC'}
{'_id': ObjectId('66387cddd702140f9742a6dc'), 'nama': 'Miftahul Huda', 'NIM': 121450125, 'kelas': 'RC'}
```