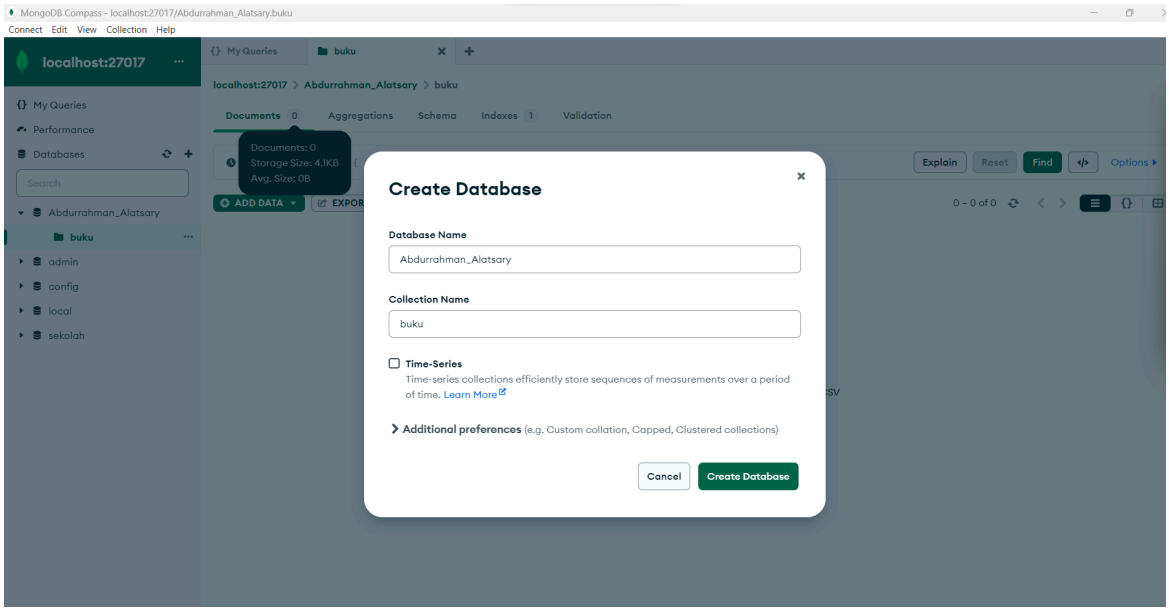
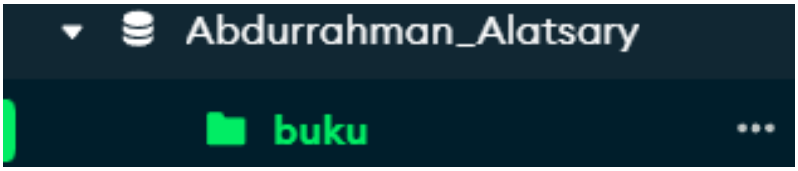
Abdurrahman Al-atsary
121450128
Tugas individu Praktikum TBD RA

Hasil Code dan Output Tugas Induvidu

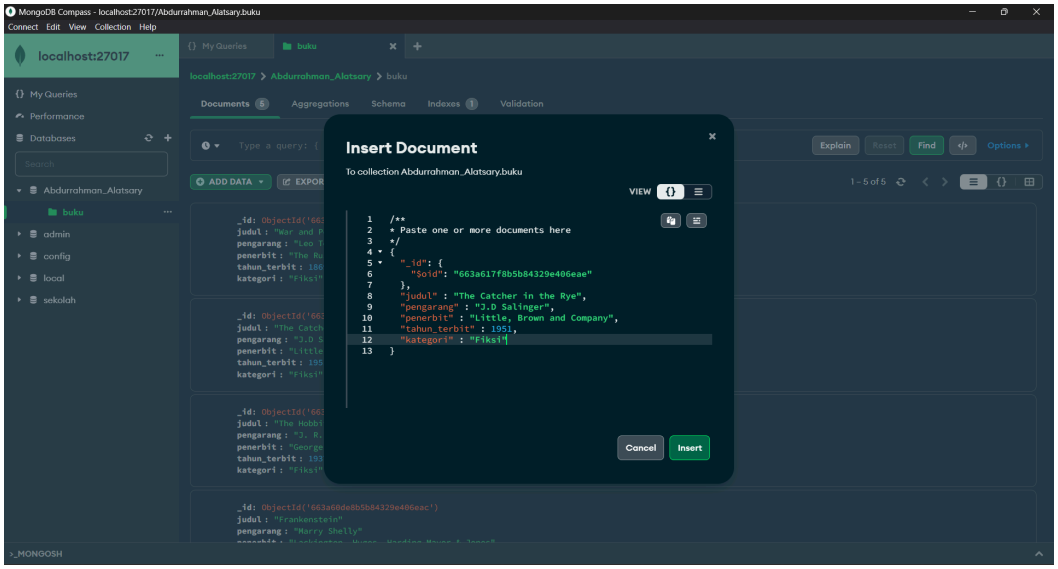
Langkah 1 : Membuat Database di MongoDB dengan format "Nama-lengkap"

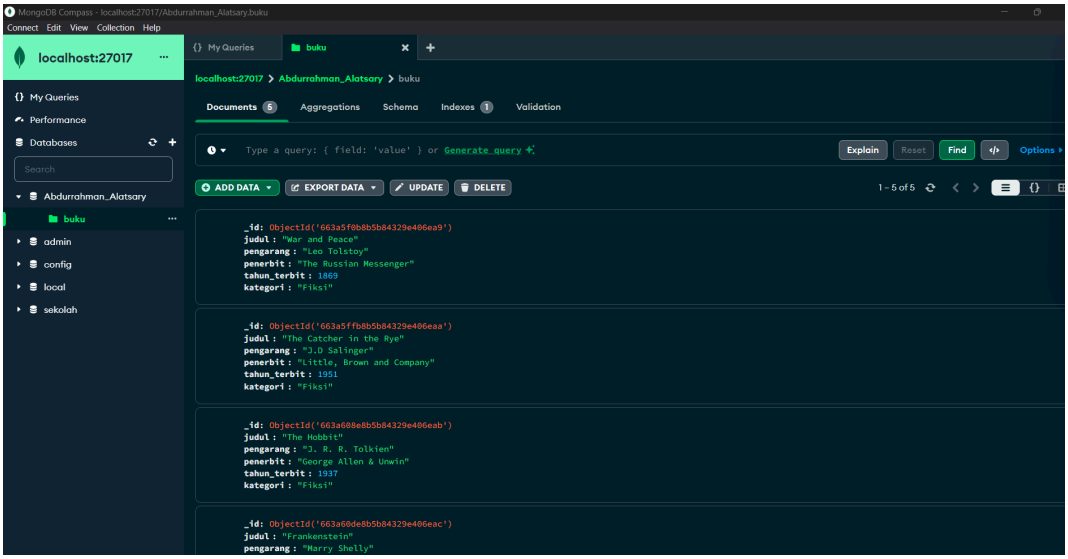


Langkah 2 : Membuat Collections dengan nama buku

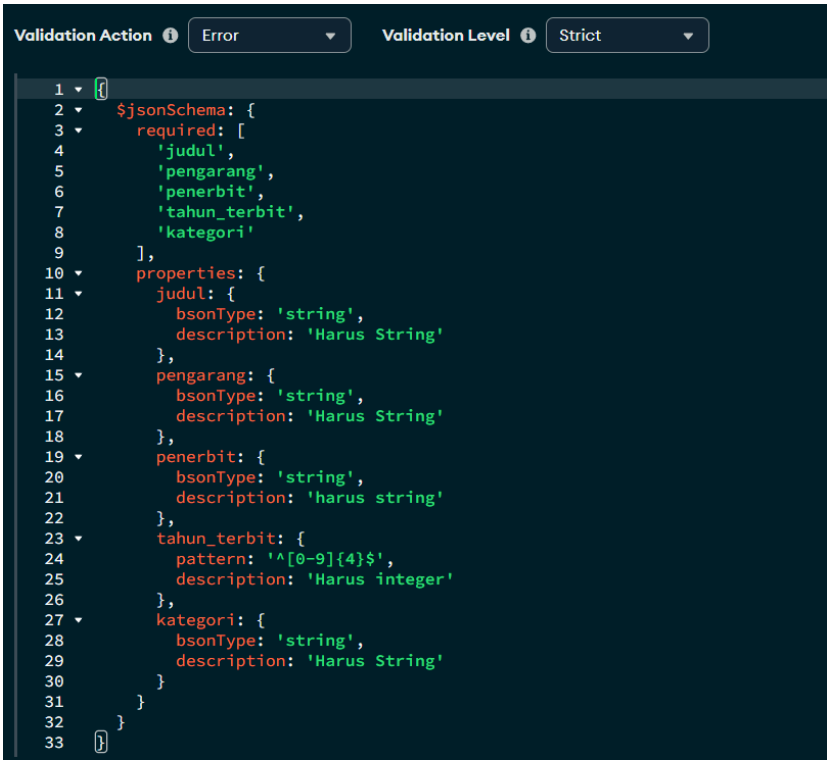


Langkah 3 : Membuat beberapa data Sesuai ketentuan



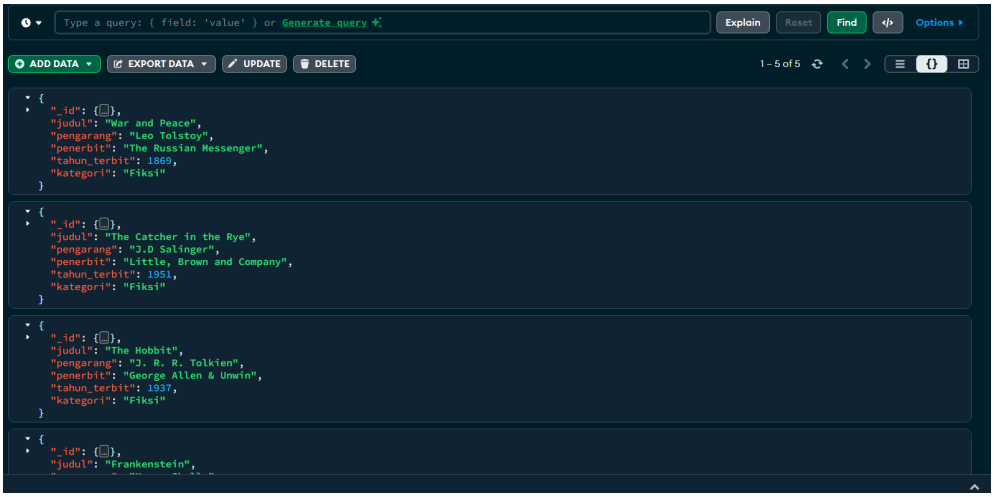


Langkah 4 : Membuat Validasi Data

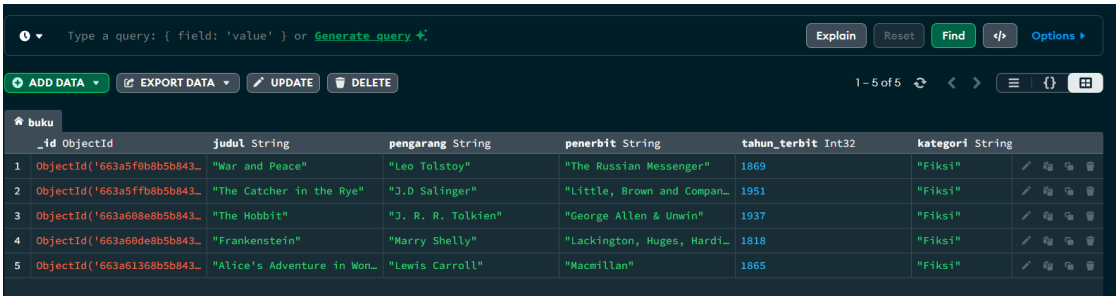


Langkah 5 : Menampilkan hasil buku dalam beberapa format tabel didalam MongoDB

Json Mode



Tabular Mode



	_id ObjectId	judul String	pengarang String	penerbit String	tahun_terbit Int32	kategori String
1	ObjectId('663a5f0b8b5b843…	"War and Peace"	"Leo Tolstoy"	"The Russian Messenger"	1869	"Fiksi"
2	ObjectId('663a5ffb8b5b843…	"The Catcher in the Rye"	"J.D Salinger"	"Little, Brown and Compan…	1951	"Fiksi"
3	ObjectId('663a608e8b5b843…	"The Hobbit"	"J. R. R. Tolkien"	"George Allen & Unwin"	1937	"Fiksi"
4	ObjectId('663a60de8b5b843…	"Frankenstein"	"Marry Shelly"	"Lackington, Huges, Hardi…	1818	"Fiksi"
5	ObjectId('663a61368b5b843…	"Alice's Adventure in Won…	"Lewis Carroll"	"Macmillan"	1865	"Fiksi"

Dengan Menggunakan Python dan pymongo

Connect to database mongodb

connect-mongodb.py U | create.py 1

Modul-4 (MongoDB) > tugas-induvidu > connect-mongodb.py > ...

```python
from pymongo import MongoClient

# menghubungkan kedalam server mongodb
try:
    client = MongoClient('mongodb://localhost:27017/')  # Ganti mongodb string connection
    print("Connected successfully to MongoDB server!")
except Exception as e:
    print(f"Error connecting to MongoDB: {e}")

# Akses Spesifik Data
db = client['Abdurrahman_Alatsary']

# Akses Spesifik Collections
collection = db['perpustakaan']

# Menutup Koneksi dengan mongodb
client.close()
```

TERMINAL | PROBLEMS 1 | OUTPUT | DEBUG CONSOLE | PORTS | GITLENS | SQL CONSOLE

```
bash: ng: command not found

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)\tugas-induvidu\connect-mongodb.py"
Connected successfully to MongoDB server!
```

Insert data (5 data) to MongoDB via Python

create.py U

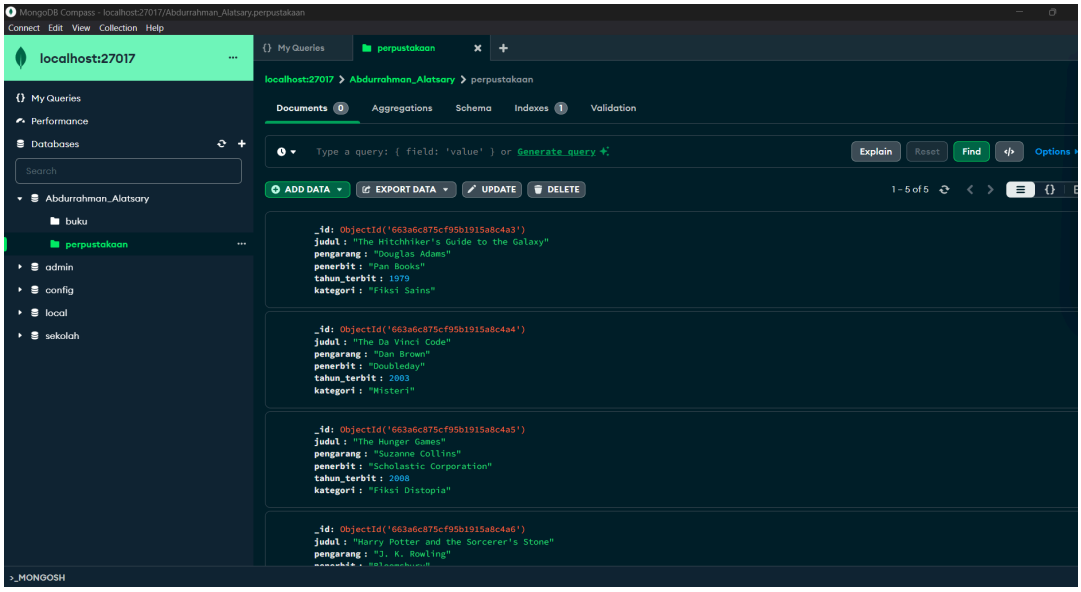
Modul-4 (MongoDB) > tugas-induvidu > create.py > data

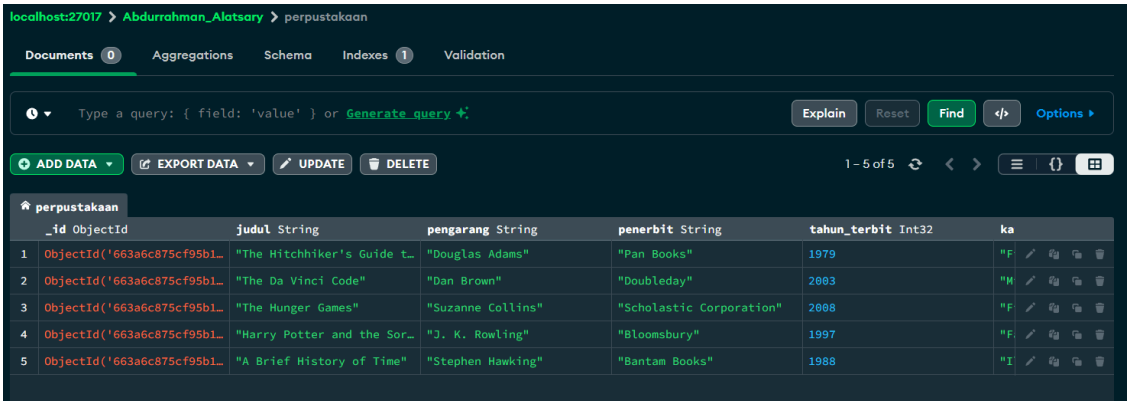
```python
# List data yang akan dimasukan
data = [
    {
        "judul" : "The Hitchhiker's Guide to the Galaxy",
        "pengarang" : "Douglas Adams",
        "penerbit" : "Pan Books",
        "tahun_terbit" : 1979,
        "kategori" : "Fiksi Sains"
    },
    {
        "judul" : "The Da Vinci Code",
        "pengarang" : "Dan Brown",
        "penerbit" : "Doubleday",
        "tahun_terbit" : 2003,
        "kategori" : "Misteri"
    },
    {
        "judul" : "The Hunger Games",
```

TERMINAL | PROBLEMS | OUTPUT | DEBUG CONSOLE | PORTS | GITLENS | SQL CONSOLE

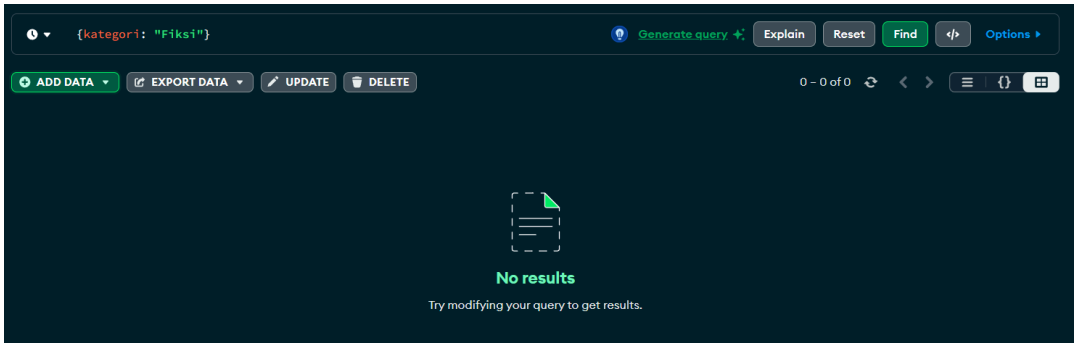
```
ACER@Khirtz MINGW64 D:/Microsoft VS Code (main)
$ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\tugas-induvidu\create.py"
Connected successfully to MongoDB server!
```

Output dalam MongoDB





Menampilkan kategori Fiksi



Memasukan 3 data tambahan dengan pengarang nama dan tahun 2024

create.py U add_books.py U

Modul-4 (MongoDB) > tugas-induvidu > add_books.py > data

```python
data = [
    {
        "judul" : "Laskar Pelangi",
        "pengarang" : "Abdurrahman A",
        "penerbit" : "ITERA",
        "tahun_terbit" : 2024,
        "kategori" : "Fiksi"
    },
    {
        "judul" : "Machine Learning for Beginner",
        "pengarang" : "Abdurrahman A",
        "penerbit" : "Databits Corp",
        "tahun_terbit" : 2024,
        "kategori" : "Pemrograman"
    },
    {
        "judul" : "Soft Skill to Show",
        "pengarang" : "Abdurrahman A",
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE PORTS GITLENS SQL CONSOLE

```
$ cd tugas-induvidu/

ACER@Khirtz MINGW64 /d/My Wish/Collage Data/Semester 6/Teknologi Basis Data/Praktikum-TBD/Modul-4 (MongoDB)/tugas-induvidu (main)
$ ls
connect-mongodb.py  create.py

ACER@Khirtz MINGW64 /d/My Wish/Collage Data/Semester 6/Teknologi Basis Data/Praktikum-TBD/Modul-4 (MongoDB)/tugas-induvidu (main)
$ code add_books.py

ACER@Khirtz MINGW64 /d/My Wish/Collage Data/Semester 6/Teknologi Basis Data/Praktikum-TBD/Modul-4 (MongoDB)/tugas-induvidu (main)
$ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\tugas-induvidu\add_books.py"
Connected successfully to MongoDB server!
Data inserted successfully.
```

localhost:27017 > Abdurrahman_Alatsary > perpustakaan

Documents 0 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or Generate query Explain Reset Find </> Options

ADD DATA EXPORT DATA UPDATE DELETE 1 - 8 of 8

```
penerbit : "Bantam Books"
tahun_terbit : 1988
kategori : "Ilmu Pengetahuan"

_id: ObjectId('663a6f155199b322640898db')
judul : "Laskar Pelangi"
pengarang : "Abdurrahman A"
penerbit : "ITERA"
tahun_terbit : 2024
kategori : "Fiksi"

_id: ObjectId('663a6f155199b322640898dc')
judul : "Machine Learning for Beginner"
pengarang : "Abdurrahman A"
penerbit : "Databits Corp"
tahun_terbit : 2024
kategori : "Pemrograman"

_id: ObjectId('663a6f155199b322640898dd')
judul : "Soft Skill to Show"
pengarang : "Abdurrahman A"
penerbit : "Databits Corp"
tahun_terbit : 2024
kategori : "Motivation"
```

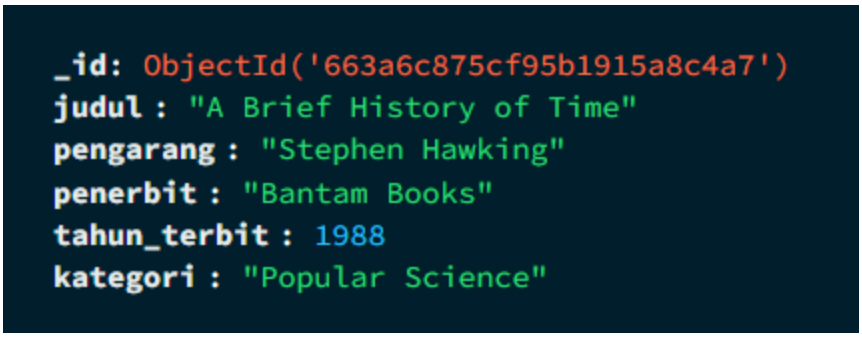
Update Kategori dari Buku Stephen Hawking jadi “Popular Sains”

create.py U | add_books.py U | update_one.py ●

```python
from pymongo import MongoClient

# Menghubungkan kedalam server mongodb
try:
    client = MongoClient('mongodb://localhost:27017/')  # Ganti mongodb string connection
    print("Connected successfully to MongoDB server!")
except Exception as e:
    print(f"Error connecting to MongoDB: {e}")

# Akses Spesifik Data
db = client['Abdurrahman_Alatsary']

# Akses Spesifik Collections
collection = db['perpustakaan']


# Criteria to find the document to update
filter_criteria = {"pengarang": "Stephen Hawking"}

# New values to set
new_values = {"$set": {"kategori": "Popular Science"}}

# Perform the update
collection.update_one(filter_criteria, new_values)

print("Data updated successfully.")
```

TERMINAL | PROBLEMS | OUTPUT | DEBUG CONSOLE | PORTS | GITLENS | SQL CONSOLE

```
ACER@Khirtz MINGW64 /d/My Wish/Collage Data/Semester 6/Teknologi Basis Data/Praktikum-TBD/Modul-4 (MongoDB)/tugas-induvidu (main)
$ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\tempCodeRunnerFile.py"
Connected successfully to MongoDB server!
Data updated successfully.
```



Menghapus Buku yang dikarang “Lewis Carroll”

create.py U | add_books.py U | update_one.py U | delete_one.py U

Modul-4 (MongoDB) > tugas-induvidu > delete_one.py > ...

```python
from pymongo import MongoClient

# Menghubungkan kedalam server mongodb
try:
    client = MongoClient('mongodb://localhost:27017/')  # Ganti mongodb string connection
    print("Connected successfully to MongoDB server!")
except Exception as e:
    print(f"Error connecting to MongoDB: {e}")

# Akses Spesifik Data
db = client['Abdurrahman_Alatsary']

# Akses Spesifik Collections
collection = db['buku']

# Mencari kriteria yang mau dihapus
filter_criteria = {"pengarang": "Lewis Carroll"}

# Eksekusi kriteria yang mau dihapus
collection.delete_one(filter_criteria)

print("Berhasil menghapus 1 baris data")
```

TERMINAL | PROBLEMS | OUTPUT | DEBUG CONSOLE | PORTS | GITLENS | SQL CONSOLE

```
$ code delete_one.py

ACER@Khirtz MINGW64 /d/My Wish/Collage Data/Semester 6/Teknologi Basis Data/Praktikum-TBD/Modul-4 (MongoDB)/tugas-induvidu (main)
$ python -u "d:\My Wish\Collage Data\Semester 6\Teknologi Basis Data\Praktikum-TBD\Modul-4 (MongoDB)\tugas-induvidu\delete_one.py"
Connected successfully to MongoDB server!
Berhasil menghapus 1 baris data
```

Data sudah tidak ada di dalam mongodb