Mongodb
+
Python

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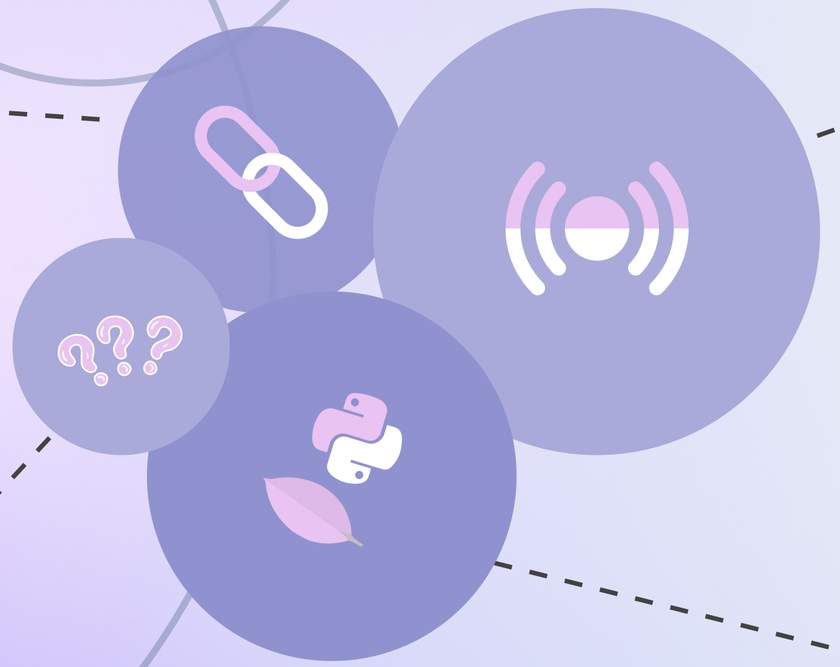
Objectives

PYMONGO DRIVER

WOKING WITH PYTHON AND MONGOBD (BASICS + LIVE EXAMPLE)



Q & A

INTORDUCTION TO MONGODB AND PYTHON

INTRODUCTION

Mongodb

Its a document-oriented NoSQL database that stores data in a JSON-like format called BSON. It integrates effortlessly with modern applications, offering dynamic schema capabilities.

Python

Python is a high-level programming language known for simplicity and readability. Its standard library and platform compatibility make it popular in web development, data analysis, and AI for all skill levels.

Pymongo

PyMongo is a Python library that serves as the official driver for MongoDB. It simplifies interactions with MongoDB databases, offering Python developers an easy way to handle data insertion and querying.

Connection to a mongodb database

This code initializes a connection to a local MongoDB server using the default port and sets the server API version to '1'. This ensures that our application communicates with MongoDB in a manner consistent with that version's specifications.

```
from pymongo.mongo_client import MongoClient
from pymongo.server_api import ServerApi

client = MongoClient('mongodb://localhost:27017',
 server_api=ServerApi('1'))
```

Getting database and collection

Accessing the database named 'TasksManagerDB' from the established connection.

```
db = client.TasksManagerDB
```

```
boards = db.Boards
```

Accessing the collection (similar to a table in relational databases) named 'Boards' within the 'TasksManagerDB' database.

CRUD Operations (insert_one)

OUTPUT:
Inserted board ID:
<some_object_id_value>

```python
new_board = {
    "board_name": "Testing",
    "tasks": [],
    "completed": False
}

# Insert the new board into the 'Boards' collection
result = boards.insert_one(new_board)
print("Inserted board ID:", result.inserted_id)
```

CRUD Operations (find_one)

OUTPUT:

```
Board found: {
  "_id": {
      "$oid":
      "6582025ec928ac2c6a11"
    },
  "board_name": "Development",
  "tasks": [... ],
  "completed": false }
```

```python
board_to_find = "Development"
board = boards.find_one({"board_name": board_to_find})

if board:
    print("Board found:", board)
else:
    print(f"No board with name '{board_to_find}' found.")
```

CRUD Operations (update_one)

OUTPUT:
Matched 1 documents and modified 1 document.

```python
task_id_to_update = 306
new_status = "Completed"

result = boards.update_one(
    {"board_name": "Development", "tasks.task_id": task_id_to_update},
    {"$set": {"tasks.$.status": new_status}}
)

print(f"Matched {result.matched_count} documents
and modified {result.modified_count} document.")
```

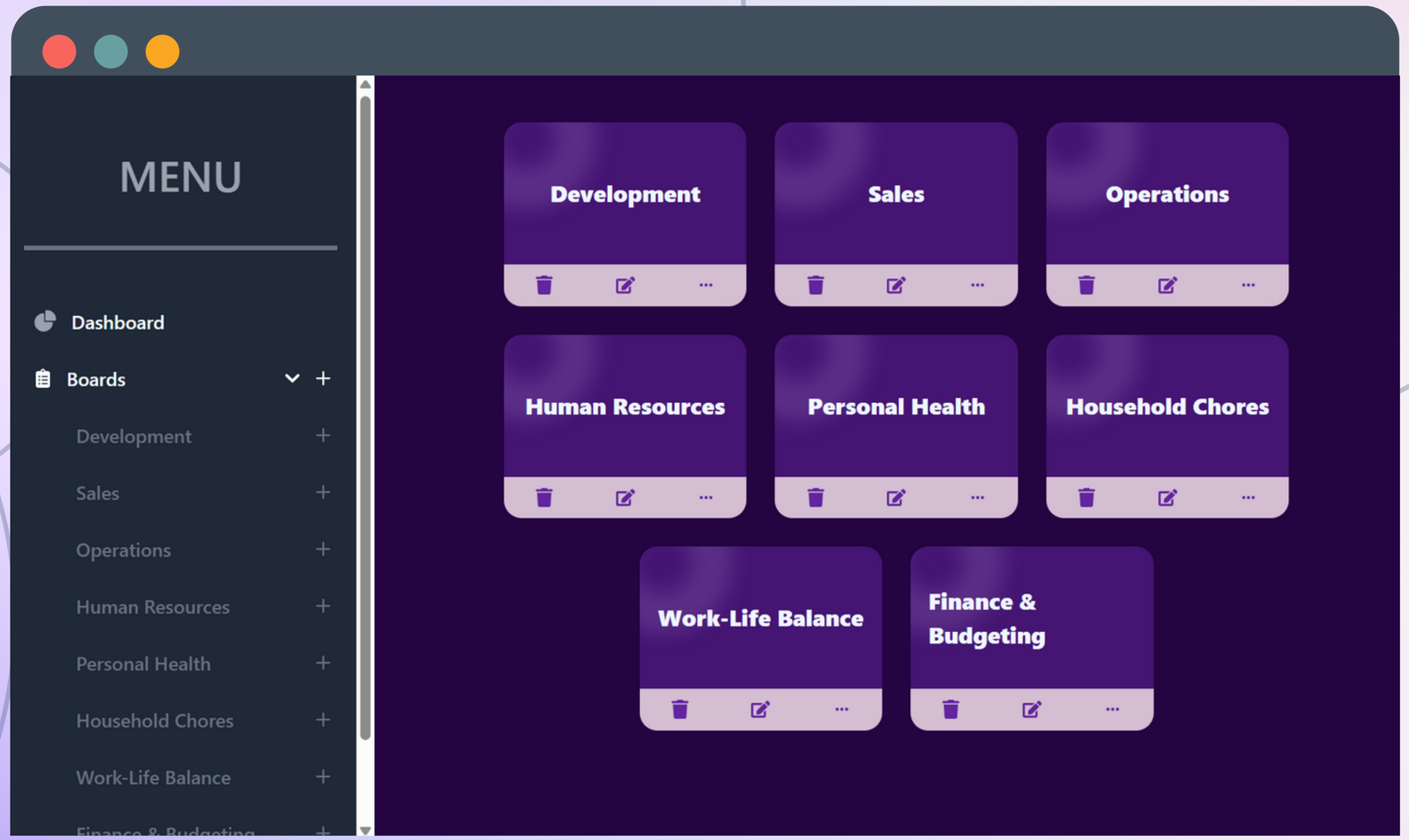
CRUD Operations (delete_one)

OUTPUT:
Deleted 1 document.

```python
task_id_to_delete = 307

query = {
    "board_name": "Development",
    "tasks.task_id": task_id_to_delete
}

result = boards.delete_one(query)

print(f"Deleted {result.deleted_count} document.")
```

Tasks Manager

-->LIVE EXAMPLE



Thank You

Q & A