BEMM459 Database Technologies for Business Analytics

Data Management With Python, MongoDB and MongoEngine

Week 10 Lab Session

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Building:ONE, 2nd Floor

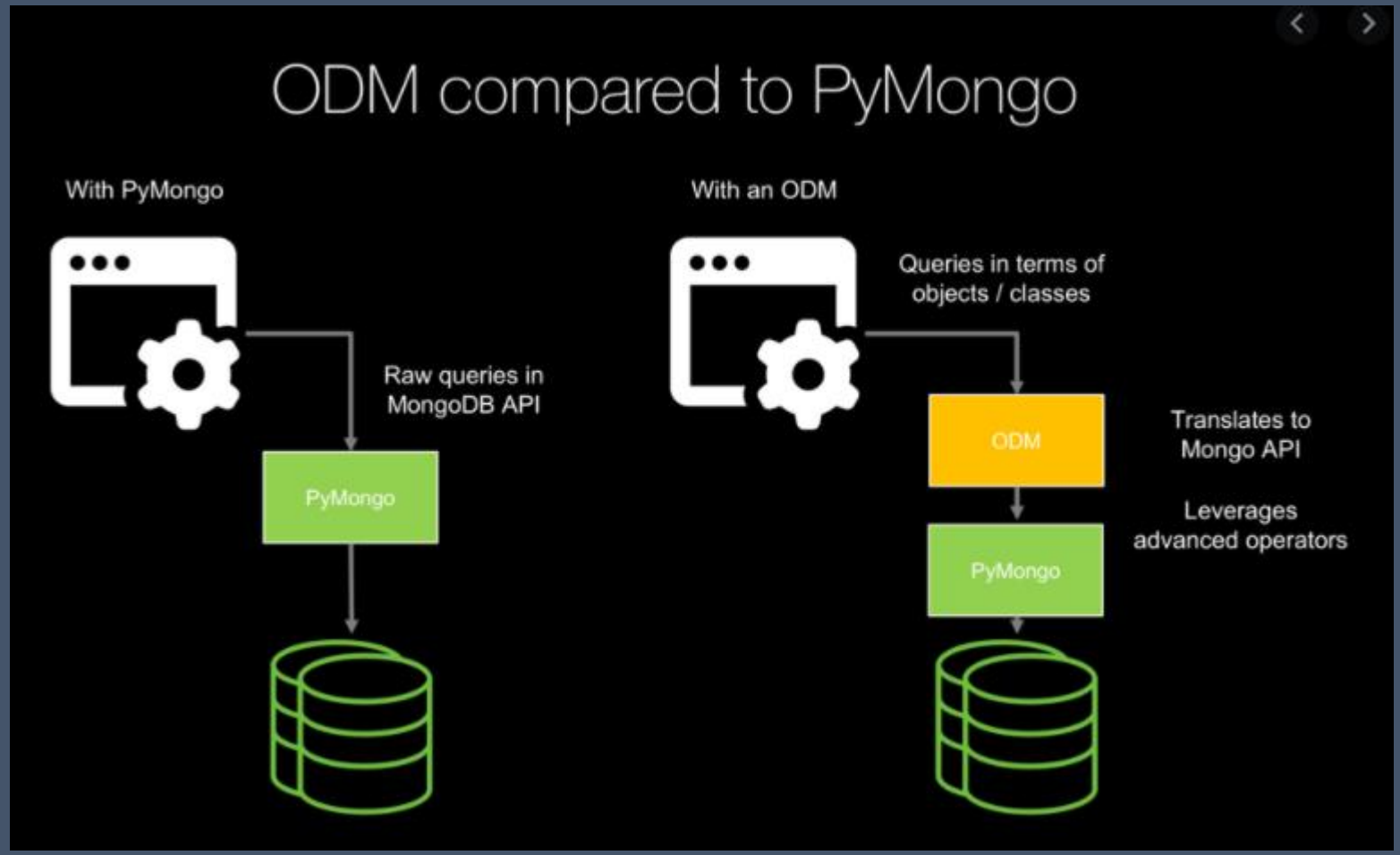
MongoEngine DOM

- MongoEngine is a **Document Object Mapper** for working with **MongoDB** from Python
  - Think Object Relationship Mapper (ORM), but for document databases
  - MongoEngine is to MongoDB what SQLAlchemy (Week 6) is to RDBMS databases.
- MongoEngine provides a convenient abstraction layer over PyMongo and maps each object of Document class to a document in MongoDB database.
- MongoEngine library provides a Document class that is used as base for defining custom class. Attributes of this class form the fields of MongoDB document.

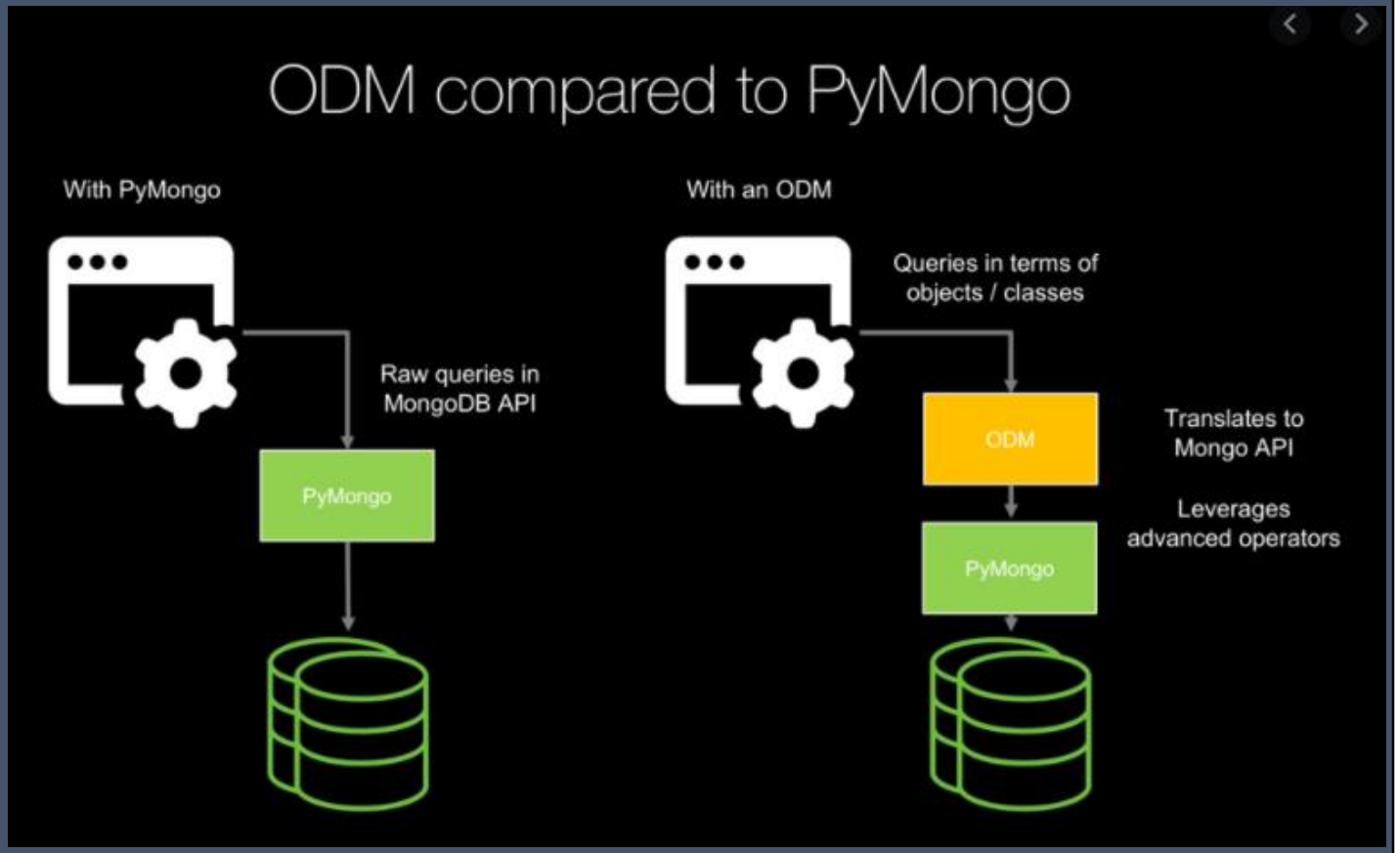
```
from mongoengine import *

class Metadata(EmbeddedDocument):
    tags = ListField(StringField())
    revisions = ListField(IntField())

class WikiPage(Document):
    title = StringField(required=True)
    text = StringField()
    metadata = EmbeddedDocumentField(Metadata)

>>> page.title = "Hello, World!"
>>> for page in WikiPage.objects:
>>>     print page.title
```

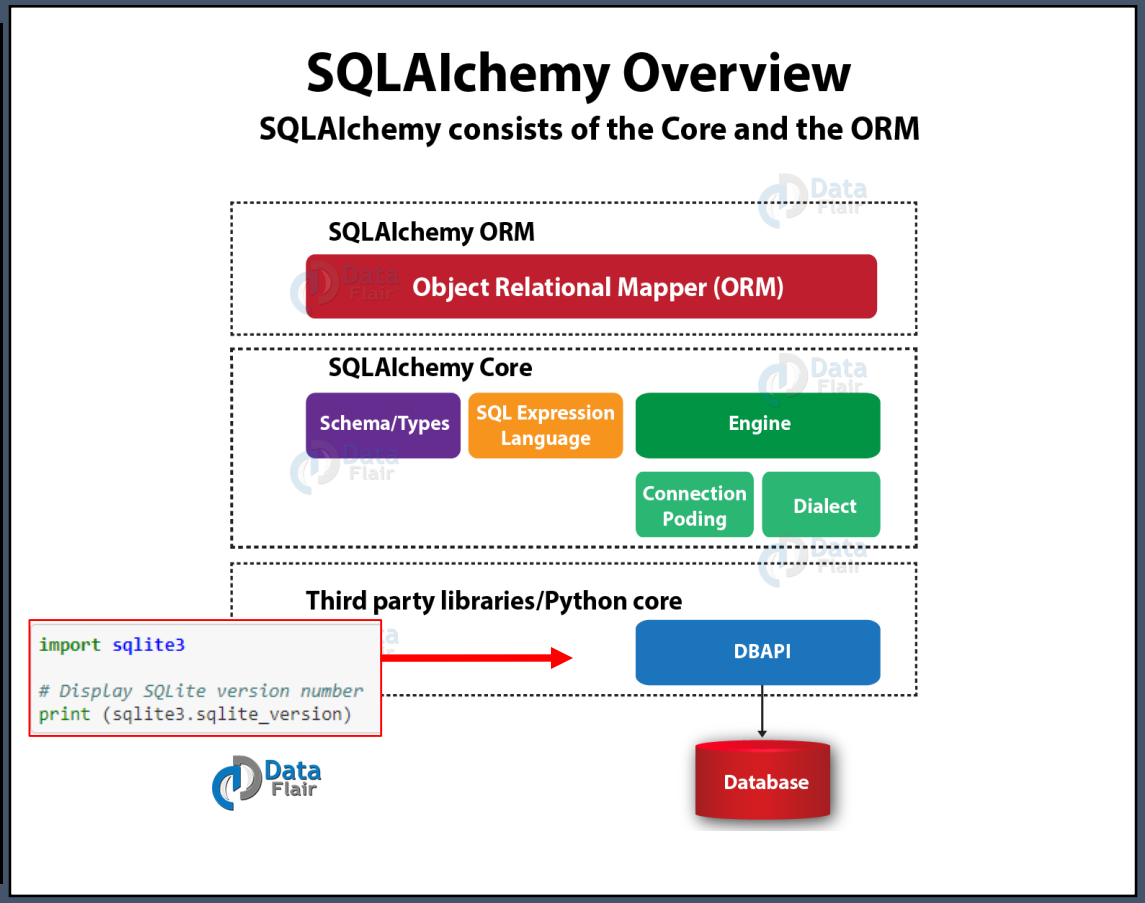
```
# To define a schema for a
# document, we create a
# class that inherits from
# Document.

# Fields are specified by
# adding field objects as
# class attributes to the
# document class.

# Querying is achieved by
# calling the objects
# attribute on a document
# class.
```

MongoEngine



Comparing ODM and ORM





Let's Practice!

- Over to Github (BEMM459 – Week 10 folder)
  - https://github.com/NavonilNM/BEMM459_RDBMS_NoSQL

Acknowledgement
https://realpython.com (image)
http://mongoengine.org/
www.tutorialspoint.com
freemongodbcourse.com (image)