TMDB Poster Download Project

TEAM 7

Team Members

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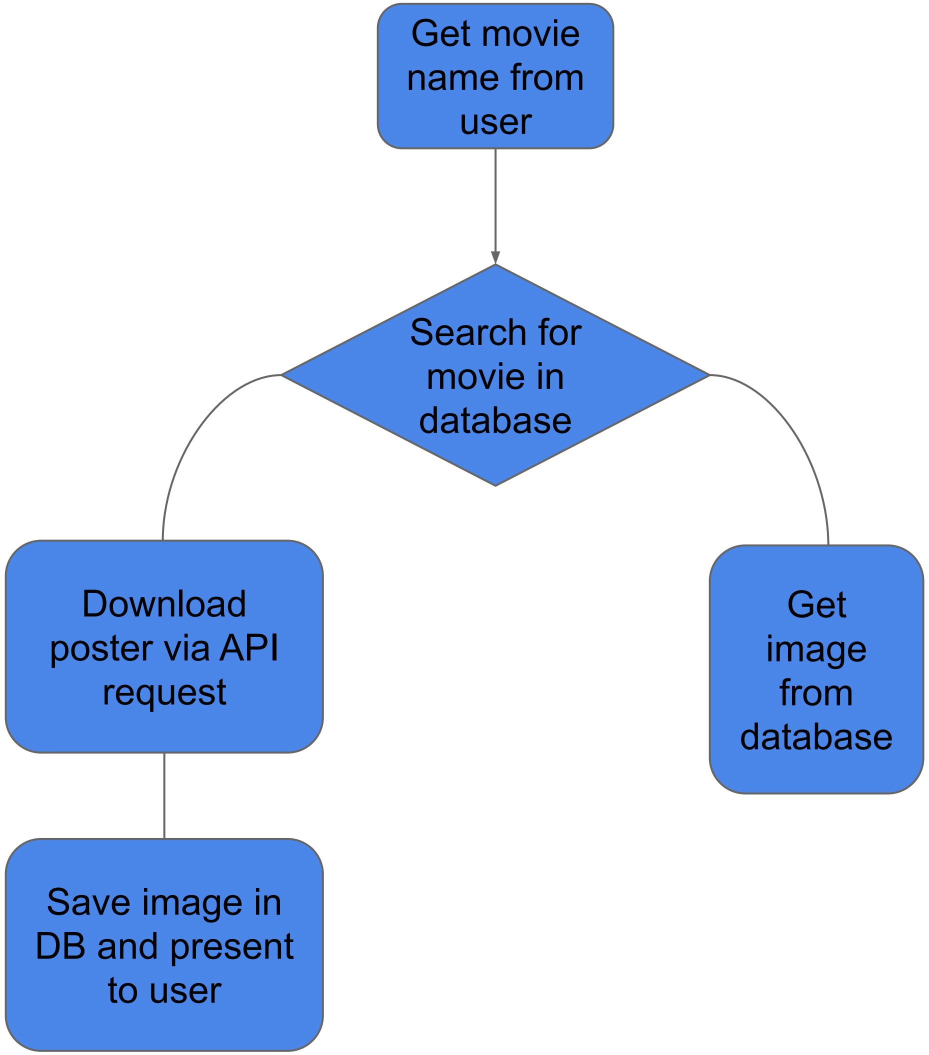
Project Objectives

- Get Movie Name
- Search Movie poster in TMDB Database
- Download poster and poster meta data and save it in MongoDB
- Construct a full Database API
- Write a simple web app to present the posters
- Dockerize the application
- Deploy application on AWS EC2 instance

Algorithm Design


Get movie name from user
Search for movie in database
Download poster via API request
Get image from database
Save image in DB and present to user

Teamwork and responsibilities

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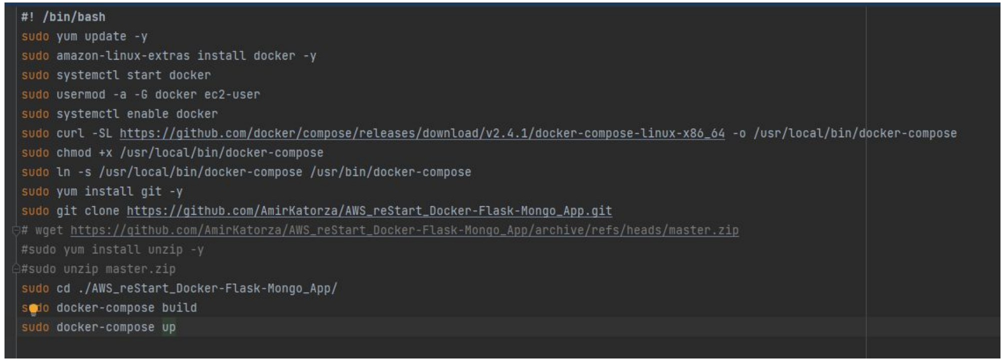
Software Design

- OOP approach - Allows scalable code and services autonomy.
- **TMDB_Downloader.py** module - holds **TMDBDownloader** class and handles all the logic of downloading posters
- **MongoDBAPI.py** module - holds **MongoAPI** class and handles all the API management logic including reading records, writing records, updating records and deleting records
- **mongo_tmdb_logic.py** module - holds the “Business logic”, integration between the two classes - if movie poster is not found in DB then download it from TMDB website and insert to DB.
- **api.py** module - hold web application logic using Flask, currently handles only presenting posters feature.

Dockerize the App and deploy on AWS

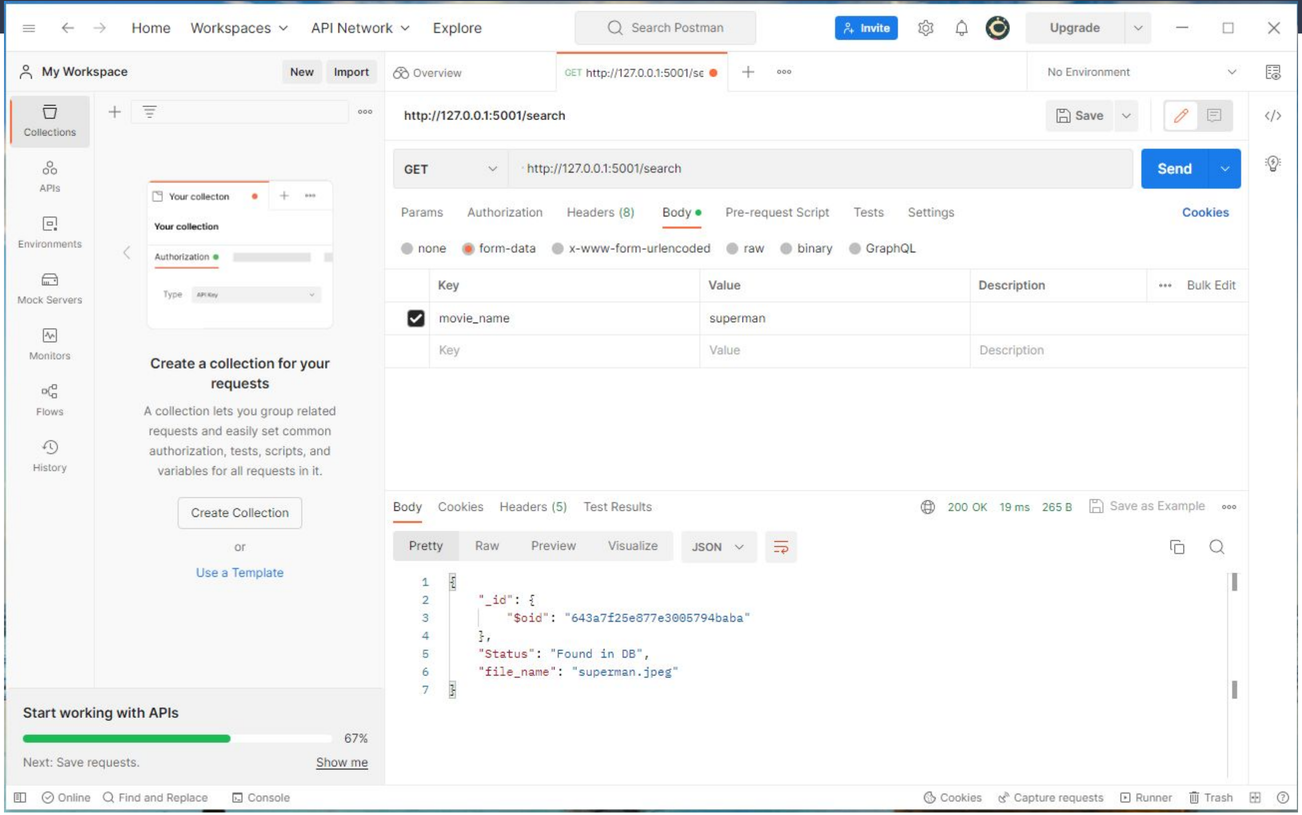
- Write Dockerfile
- Write docker-compose file
- Write user_data script to deploy the App on an EC2 instance



```
#! /bin/bash
sudo yum update -y
sudo amazon-linux-extras install docker -y
sudo systemctl start docker
sudo usermod -a -G docker ec2-user
sudo systemctl enable docker
sudo curl -SL https://github.com/docker/compose/releases/download/v2.4.1/docker-compose-linux-x86_64 -o /usr/local/bin/docker-compose
sudo chmod +x /usr/local/bin/docker-compose
sudo ln -s /usr/local/bin/docker-compose /usr/bin/docker-compose
sudo yum install git -y
sudo git clone https://github.com/AmirKatorza/AWS_reStart_Docker-Flask-Mongo_App.git
# wget https://github.com/AmirKatorza/AWS_reStart_Docker-Flask-Mongo_App/archive/refs/heads/master.zip
#sudo yum install unzip -y
#sudo unzip master.zip
sudo cd ./AWS_reStart_Docker-Flask-Mongo_App/
sudo docker-compose build
sudo docker-compose up
```

Reference:
https://gist.github.com/npearce/6f3c7826c7499587f00957fee62f8ee9

GET requests screenshots – Postman



http://127.0.0.1:5001/search

GET http://127.0.0.1:5001/search

Body: none [✓ form-data] x-www-form-urlencoded raw binary GraphQL

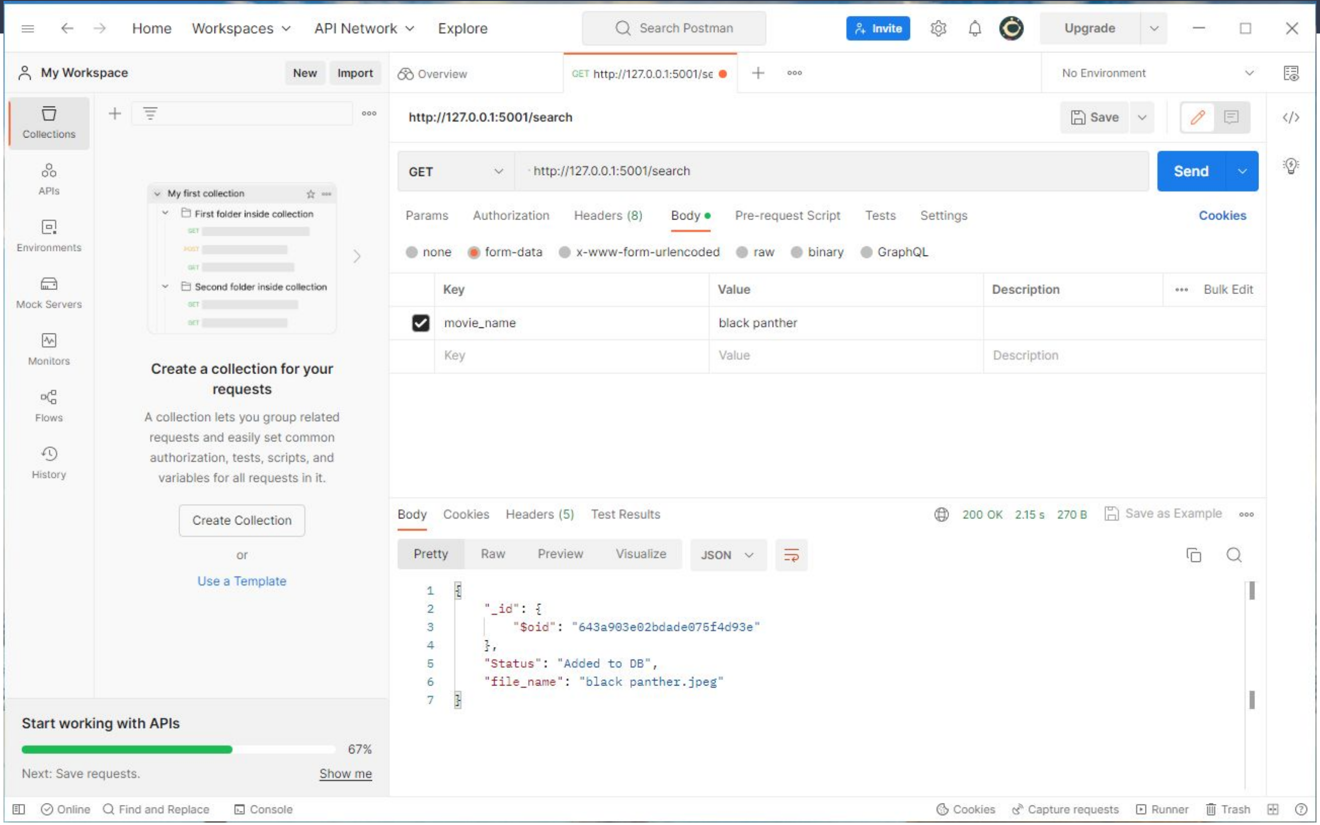
	Key	Value	Description
✓	movie_name	superman	
	Key	Value	Description

Body Cookies Headers (5) Test Results — 200 OK 19 ms 265 B — Save as Example

JSON

```
{
    "_id": {
        "$oid": "643a7f25e877e3005794baba"
    },
    "Status": "Found in DB",
    "file_name": "superman.jpeg"
}
```

GET requests screenshots – Postman



http://127.0.0.1:5001/search

GET http://127.0.0.1:5001/search

Body: form-data

Key	Value	Description
✓ movie_name	black panther	

```
{
    "_id": {
        "$oid": "643a903e02bdade075f4d93e"
    },
    "Status": "Added to DB",
    "file_name": "black panther.jpeg"
}
```

What can be improved?

- Improved UI (User Interface) Design - currently a simple HTML form with only search feature.
- Full API coverage by the web application including updating a records and deleting records.
- Scale UP - currently downloading only the first movie from search results and only the first poster image.

  We want to save all movies from search results and all the posters related.

Challenges

- Learning new technologies in a very short amount of time.
- Learn how to integrate and orchestrate all the technologies to work together.
- Not enough ManPower to handle a project in that scale.

Thank You

For Listening!