Social Media Data Streaming

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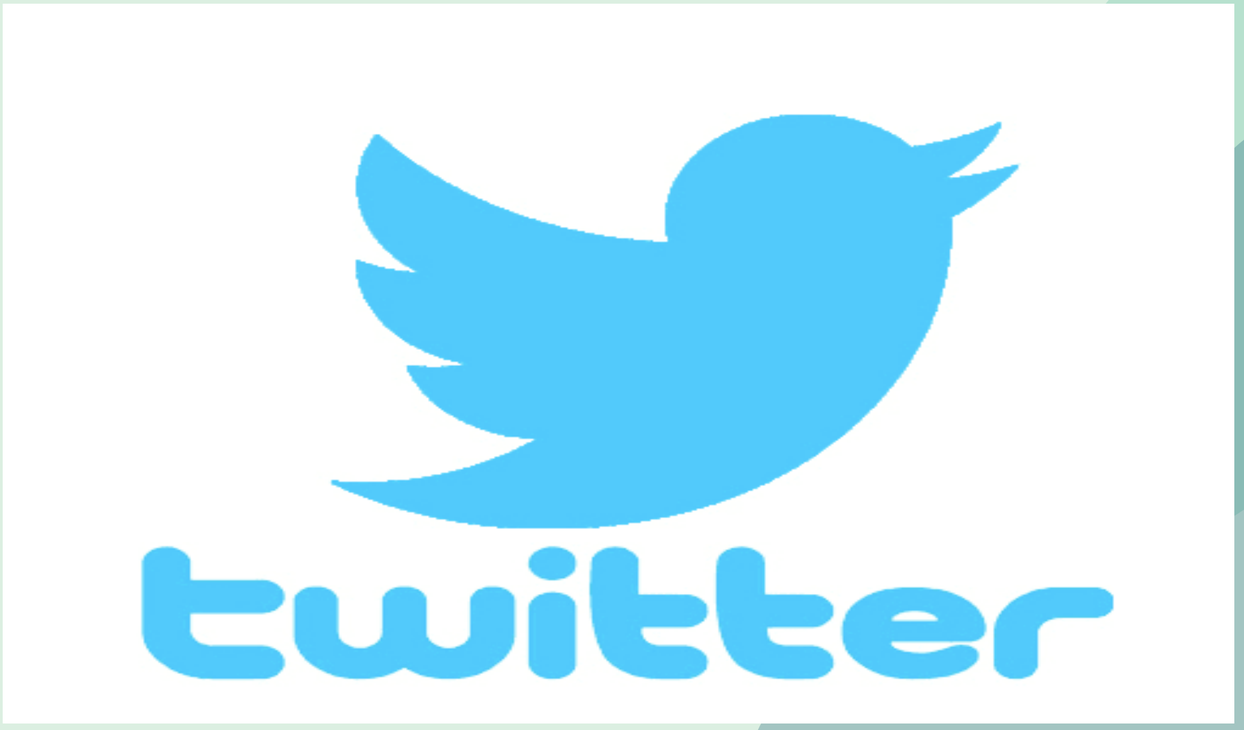
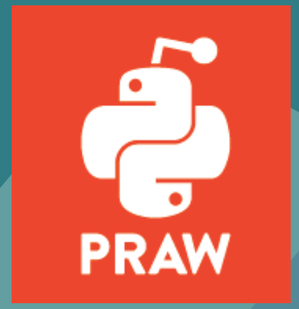
Contents

Social Media

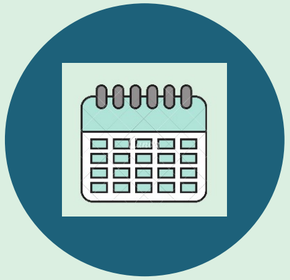


Tools



Data Model

```
post =[ ]
for d in tweets_text:
        postTwitter = {
            'id': user.id,
            'name':user.name ,
            'text': d
             }
```



```
for posts in postReddit:
    posts={ "id":posts.id,
            "name": posts.author.name,
            "Text": posts.title}
```

Data Collection - Twitter

hellotwitter.py × helloreddit.py

venv > hellotwitter.py > ...

```python
import tweepy
import dns
from dns import resolver
from pymongo import MongoClient


client = MongoClient('mongodb+srv://Yuxin:Lyx19960227@cluster0.nhbu1.mongodb.net/myFirstDatabase?retryWrit
db = client['Assignment2']

# Variables that contains the user credentials to access Twitter API
ACCESS_TOKEN = "1406070447481884672-Kqtr6XxTAg3lcghhOjFUrHDCGUknNj"
ACCESS_TOKEN_SECRET = "CYwxFMEqTiLDvlHIA2ExcUDwN9IxlclFqISSFsgZyAJCO"
CONSUMER_KEY = "WS8tQxD1P1GgmSgTWCH8J4Ma0"
CONSUMER_SECRET = "QIU8lBApulLocyIgCXJJSEzXVUiev63CgnE3Qom6UiYnn53All"

def stream_tweets(username):
        # This handles Twitter authetification and the connection to Twitter Streaming API
        auth= tweepy.OAuthHandler(CONSUMER_KEY, CONSUMER_SECRET)
        auth.set_access_token(ACCESS_TOKEN,ACCESS_TOKEN_SECRET)


        # Create an API object
        api = tweepy.API(auth)

        # Read the tweets
        tweets = api.user_timeline(screen_name=username)
```

hellotwitter.py × helloreddit.py

venv > hellotwitter.py > ...

```python
        auth= tweepy.OAuthHandler(CONSUMER_KEY, CONSUMER_SECRET)
        auth.set_access_token(ACCESS_TOKEN,ACCESS_TOKEN_SECRET)


        # Create an API object
        api = tweepy.API(auth)

        # Read the tweets
        tweets = api.user_timeline(screen_name=username)
        user = api.get_user(username)
        tweets_text = [tweet.text for tweet in tweets]

        # Store in the database
        post =[ ]
        for d in tweets_text:
                postTwitter = {
                   'id': user.id,
                   'name':user.name ,
                   'text': d
                    }
                post.append(postTwitter)

        print(postTwitter)
        twitter1 = db.Twitter
        sub_id = twitter1.insert_many(post)

if __name__ == '__main__':
    stream_tweets("YuxinLi19980652")
```

REFERENCE: https://www.tweepy.org/

Data Collection - Reddit

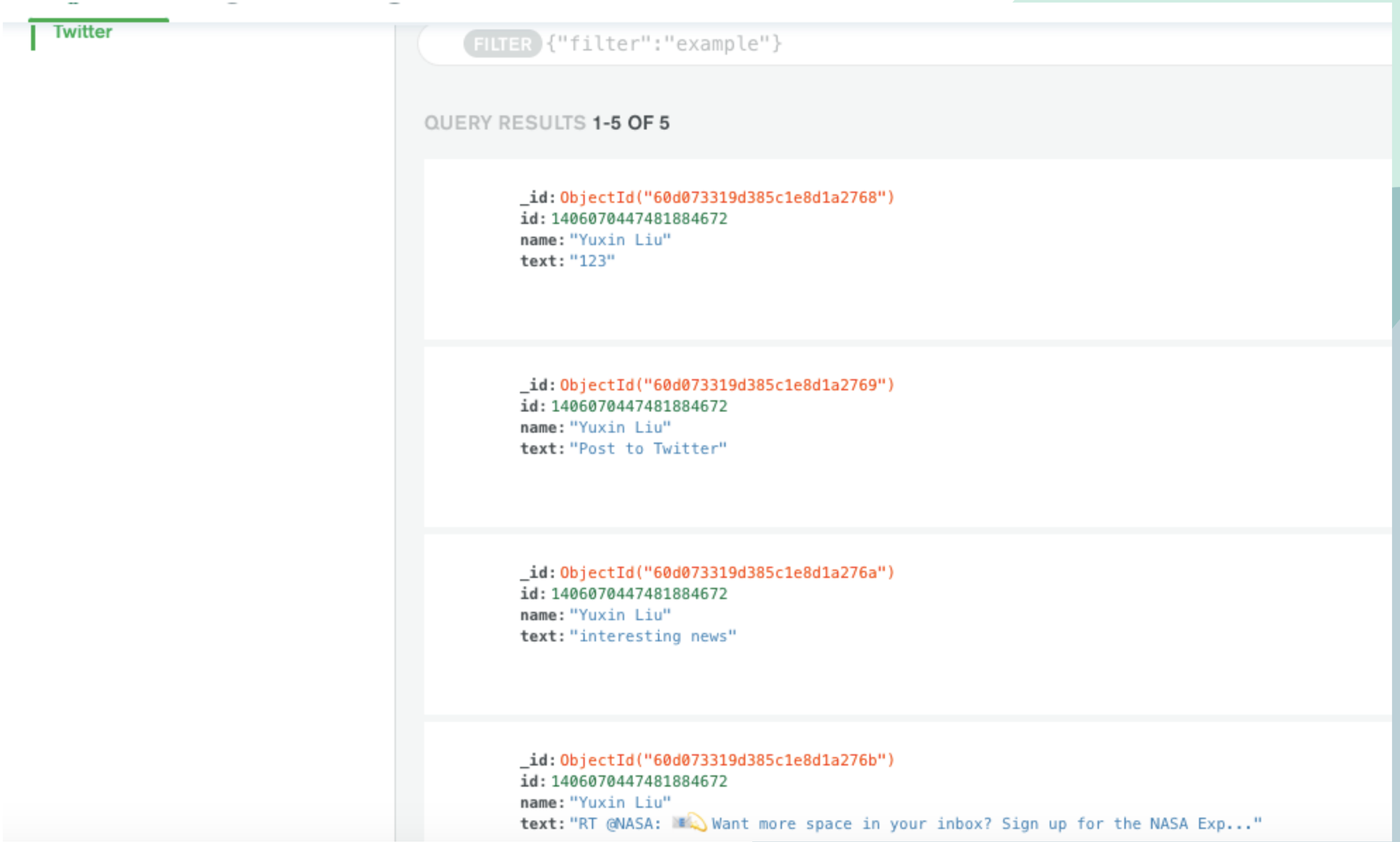
hellotwitter.py | helloreddit.py

venv > helloreddit.py > ...

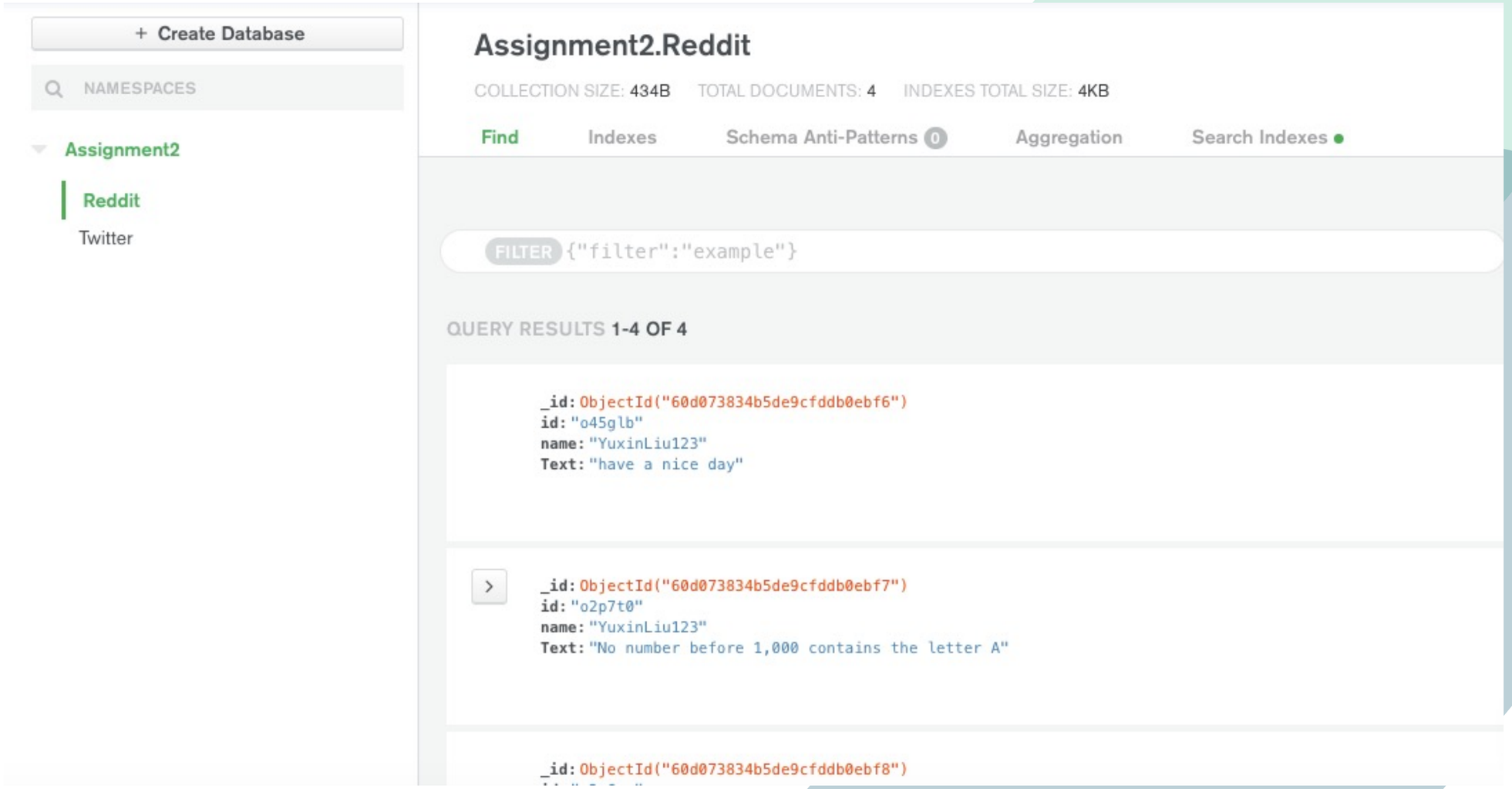
```python
import praw
import requests
import dns
from dns import resolver
from pymongo import MongoClient

client = MongoClient('mongodb+srv://Yuxin:Lyx19960227@cluster0.nhbu1.mongodb.net/myFirstDatabase?retryWrites=true&w=majority')

# Variables that contains the user credentials to access reddit API
reddit = praw.Reddit(client_id = "n6gNZGiFkrNPqw",
                     client_secret = "--Dt4efhzMRDqg1CPtumJ17TLX3FUA",
                     user_agent = "YuxinLiu123",
                     username = "YuxinLiu123",
                     password = "Lyx19960227")

post =[ ]

postReddit = reddit.redditor("YuxinLiu123").submissions.top()
for posts in postReddit:
    posts={ "id":posts.id,
            "name": posts.author.name,
            "Text": posts.title}


    post.append(posts)

db = client['Assignment2']
subreddit1 = db.Reddit

subreddit1.insert_many(post)
```

REFERENCE: https://praw.readthedocs.io/en/latest/

➢ MongoDB- Twitter



➢ MongoDB- Reddit



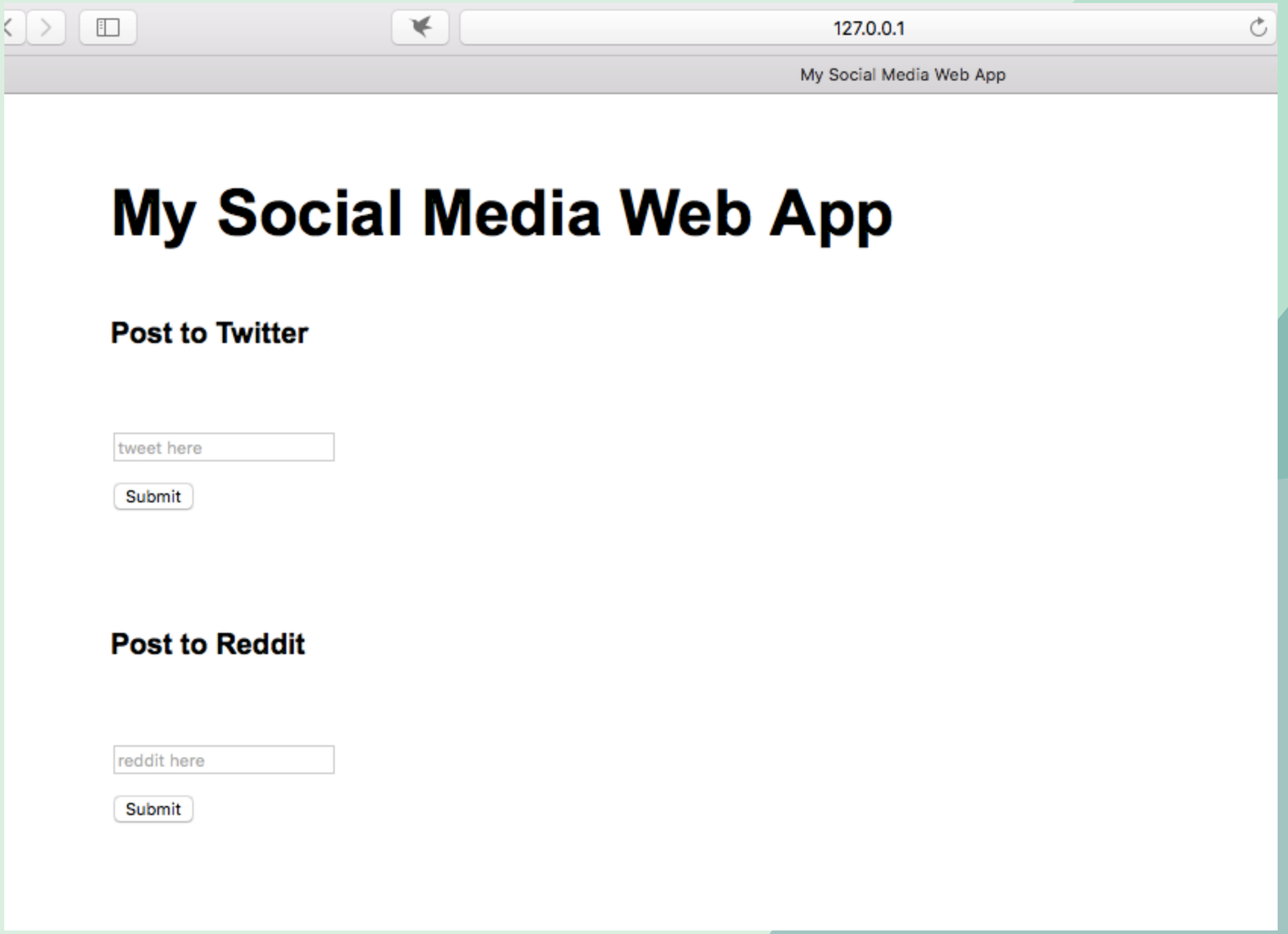
➢ Web Application

```python
@app.route('/')
def Twitter111():
    if request.args:
        tweet = request.args.get('tweet')

        auth= tweepy.OAuthHandler(CONSUMER_KEY, CONSUMER_SECRET)
        auth.set_access_token(ACCESS_TOKEN,ACCESS_TOKEN_SECRET)
        api = tweepy.API(auth)

        #update the status
        api.update_status(status = tweet)

        user0 = api.get_user("YuxinLi19980652")
        Twitter111 ={
                        'id': user0.status.id,
                        'name': user0.name,
                        'image_url': user0.profile_image_url,
                        'content':tweet
                    }
        twitter1 = db.Twitter
        twitter1.insert_one(Twitter111)
        result = True
    else:
        result = False
    return render_template('form.html', res = result )
```

```python
@app.route('/reddit')
def Reddit111():
    if request.args:
        post = request.args.get('post')
        sub = reddit.subreddit('u_YuxinLiu123')
        result = True
        subreddit = {
                        "id": sub.id,
                        "name": "YuxinLiu123",
                        "Text":post
                    }
        subreddit1= db.Reddit
        subreddit1.insert_one(subreddit)
        result = True
    else:
        result = False
    return render_template('form.html', res = result )

if __name__ == '__main__':
    app.run(debug=True)
```

REFERENCE: https://www.youtube.com/watch?v=9RAA845Gxn8

➢ Web page


127.0.0.1
My Social Media Web App
My Social Media Web App
Post to Twitter
tweet here
Submit
Post to Reddit
reddit here
Submit

➢ HTML/ CSS

nv > templates > form.html > html > body

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>My Social Media Web App </title>
    <link rel="stylesheet" href="/static/style.css" />
  </head>
  <body>

      <h2>My Social Media Web App</h2>

<div class="container m-5">
  <h6>Post to Twitter</h6>
    <form type="POST" action="/">
  <div class="row">
    <div class="col">
      <input type="text" class="form-control" placeholder="tweet here" name=
    </div>
    <input type="submit" name="Post to Twitter">
  </div>
  </form>
```

env > static > style.css > body

```
html {
    font-size: 28px;
    font-family: "Segoe UI", Arial, Helvetica, sans-serif;
  }

  body {
    max-width: 1000px;
    margin: 0 auto;
    padding: 20px;
  }

  .form__fieldset {
    padding: 20px 10px;
  }

  .form__fieldset:not(:last-of-type) {
    border-bottom: 1px solid rgba(0, 0, 0, 0.1);
  }

  .form__input {
    font-size: 1rem;
  }
```

Demo

Link to the presentation:
https://www.youtube.com/watch?v=tnehrrtb_Hc

THANKS