

Database Start

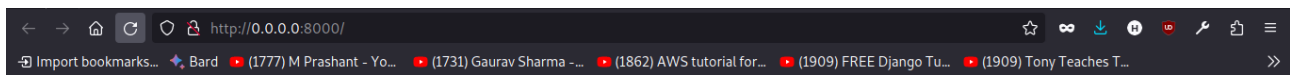
```
File Edit View Search Terminal Help
[hasan@parrot]-[~]
$ sudo systemctl start mysql
[sudo] password for hasan:
[hasan@parrot]-[~]
$ sudo systemctl status mysql
● mariadb.service - MariaDB 10.5.21 database server
   Loaded: loaded (/lib/systemd/system/mariadb.service; disabled; preset: disabled)
   Active: active (running) since Thu 2023-11-02 16:01:37 EDT; 16h ago
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 14589 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/lib/mysql
   Process: 14590 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_S
   Process: 14592 ExecStartPre=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] &&
   Process: 14658 ExecStartPost=/bin/sh -c systemctl unset-environment _WSREP_
   Process: 14660 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0)
  Main PID: 14640 (mariadbd)
   Status: "Taking your SQL requests now..." Typically use the package manager that comes with your
   Tasks: 12 (limit: 9291)
  Memory: 21.1M
    CPU: 4.484s
   CGroup: /system.slice/mariadb.service
           └─14640 /usr/sbin/mariadbd
```

Database configuration:

```
database.py
You, 2 seconds ago | 2 authors (objizbo and others)
1  import mysql.connector
2  import time
3
4  # Wait for MySQL container to start up
5  time.sleep(5) # Adjust the delay as needed
6  # Database connection configuration
7  db_config = {
8      "host": "localhost",
9      "port": 3306,
10     "user": "root",
11     "password": "H12345",
12     "database": "movieDB",
13 }
14
15 # Establish a database connection
16 db_connection = mysql.connector.connect(**db_config)
17 db_cursor = db_connection.cursor()
18
19 def search_movies_by_year(year_of_release):
20     db_connection = mysql.connector.connect(**db_config) # Establish a new database connection
21     db_cursor = db_connection.cursor()
```

Run FastApi Framework app:

```
(vFast) [hasan@parrot]-[~/Desktop/git_prac/python_app_deployment/python-fast-api-app]
$ python3 main.py
INFO: Started server process [78841]
INFO: Waiting for application startup.
INFO: Application startup complete.
INFO: Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
```



Movies Search

Search by Year of Release:

Search Results:

Movie Name Year of Release Box Office Director Producer Cast

```
[hasan@parrot]~/Desktop/git_prac/python_app_deployment/python-fast-app]
$ sudo mysql
[sudo] password for hasan:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 31
Server version: 10.5.21-MariaDB-0+deb11u1 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> INSERT INTO movieDB.hollywood (movie_name, year_of_release, box_office, director, producer, cast)
-> VALUES
-> ('The Shawshank Redemption', 1994, 28.34, 'Frank Darabont', 'Niki Marvin', 'Tim Robbins, Morgan Freeman');
Query OK, 1 row affected (0.002 sec)

MariaDB [(none)]> select * from movieDB.hollywood;
+-----+-----+-----+-----+-----+-----+
| movie_name | year_of_release | box_office | director | producer | cast |
+-----+-----+-----+-----+-----+-----+
| The Shawshank Redemption | 1994 | 28.34 | Frank Darabont | Niki Marvin | Tim Robbins, Morgan Freeman |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

Database Data insert:

Micro service main app run:

```
$python3 main.py
* Serving Flask app 'main'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Running on http://127.0.0.1:8010
Press CTRL+C to quit
127.0.0.1 - - [03/Nov/2023 10:07:11] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [03/Nov/2023 10:07:11] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [03/Nov/2023 10:07:13] "GET /redirect-9000 HTTP/1.1" 302 -
127.0.0.1 - - [03/Nov/2023 10:58:41] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [03/Nov/2023 10:58:41] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [03/Nov/2023 10:58:43] "GET /redirect-9000 HTTP/1.1" 302 -
127.0.0.1 - - [03/Nov/2023 20:16:20] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [03/Nov/2023 20:16:26] "GET /redirect-9000 HTTP/1.1" 302 -
127.0.0.1 - - [03/Nov/2023 20:47:49] "GET / HTTP/1.1" 200 -
```

REDIRECT BUTTONS

POSTS

MUSICS

```
Parrot Terminal
File Edit View Search Terminal Help
(vapp1) [~][hasan@parrot]~/Desktop/git_prac/python_app_deployment/python-micro-service/post_app]
└─$ sudo mysql
[sudo] password for hasan:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 66
Server version: 10.5.21-MariaDB-0+deb11u1 Debian 11

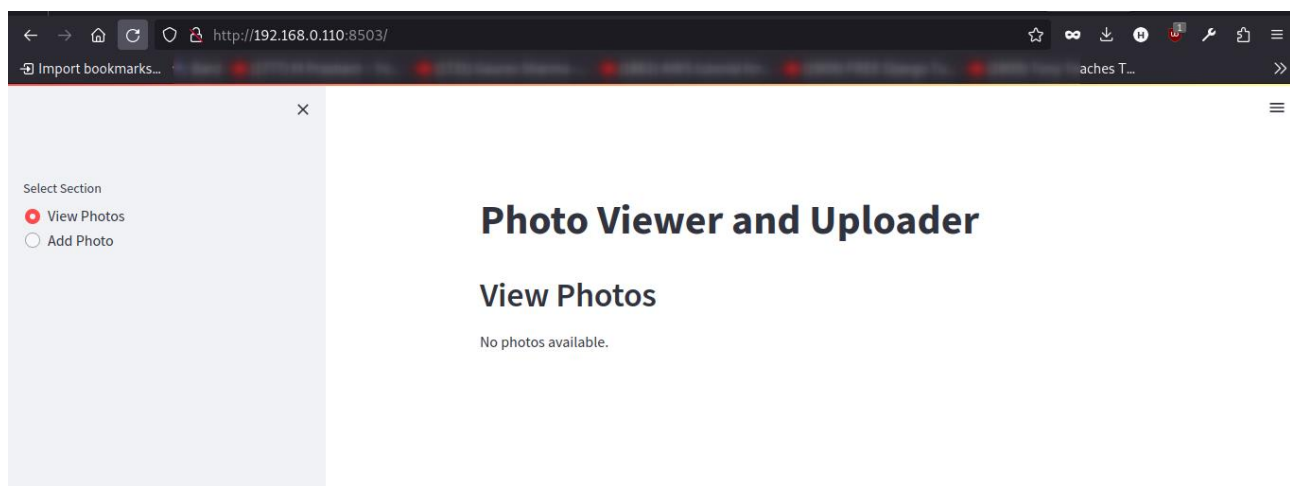
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create table collection.photo(
  ->   name VARCHAR(255) NOT NULL,
  ->   data LONGBLOB NOT NULL
  -> );
Query OK, 0 rows affected (0.013 sec)

MariaDB [(none)]> Ctrl-C -- exit!
Aborted
(vapp1) [~][hasan@parrot]~/Desktop/git_prac/python_app_deployment/python-micro-service/post_app]
└─$ streamlit run appl.py

You can now view your Streamlit app in your browser.
```



Streamlite app run:

```
Parrot Terminal
File Edit View Search Terminal Help
(vapp2) [~][hasan@parrot]~/Desktop/git_prac/python_app_deployment/python-micro-service/music_app]
└─$ sudo mysql
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 58
Server version: 10.5.21-MariaDB-0+deb11u1 Debian 11

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

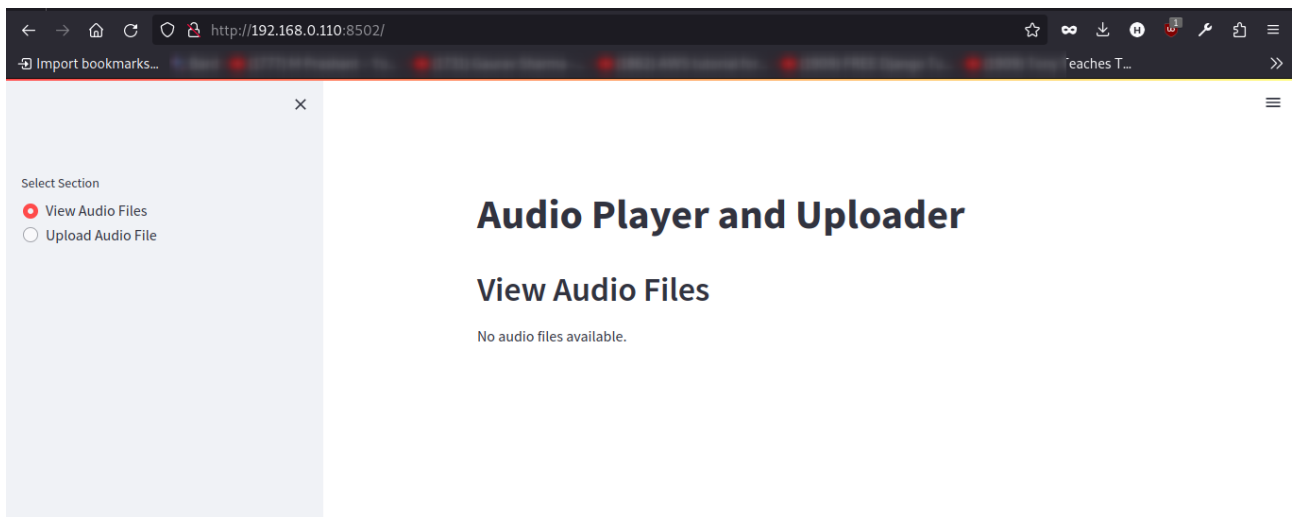
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create table collection.music(
  ->   name VARCHAR(255) NOT NULL,
  ->   data LONGBLOB NOT NULL
  -> );
Query OK, 0 rows affected (0.019 sec)

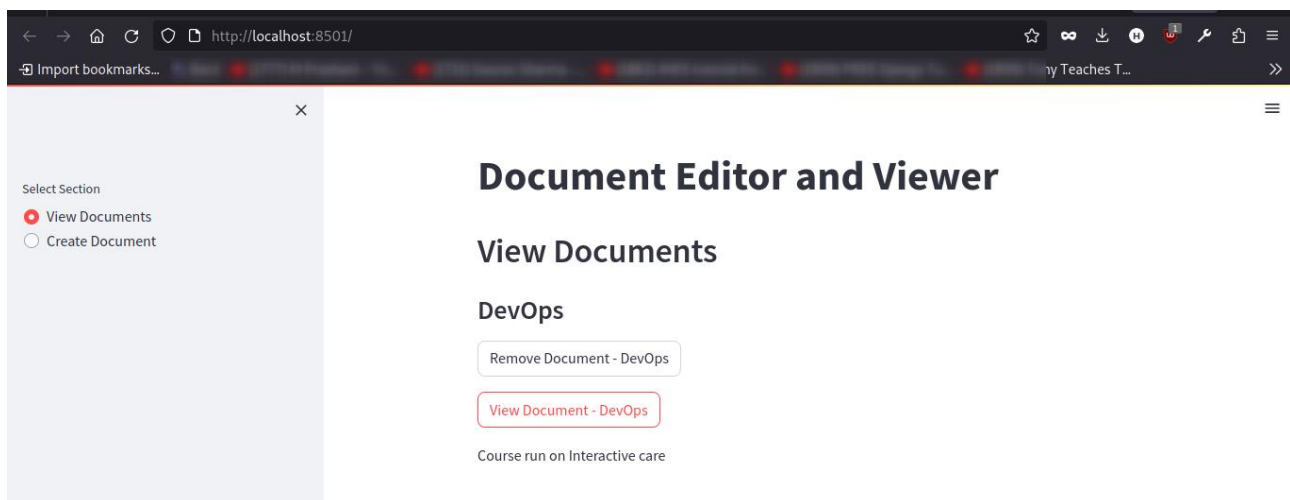
MariaDB [(none)]> Ctrl-C -- exit!
Aborted
(vapp2) [~][hasan@parrot]~/Desktop/git_prac/python_app_deployment/python-micro-service/music_app]
└─$ streamlit run app2.py

You can now view your Streamlit app in your browser.

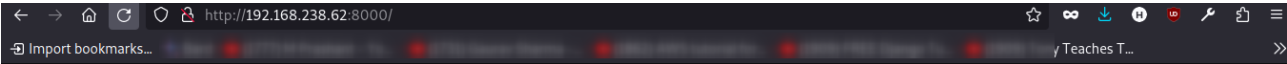
Local URL: http://localhost:8502
Network URL: http://192.168.0.106:8502
```



```
Parrot Terminal
File Edit View Search Terminal Help
(vapp3) [x]-[hasan@parrot]~/Desktop/git_prac/python_app_deployment/python-micro-service/document_app
└─$ sudo mysql
Welcome to the MariaDB monitor. 12 Commands end with ; or \g.
Your MariaDB connection id is 467.
Server version: 10.5.21-MariaDB-0+deb11u1 Debian 11
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MariaDB [(none)]> create table collection.documents(
  ->   id INT AUTO INCREMENT PRIMARY KEY,
  ->   name VARCHAR(255) NOT NULL,
  ->   data TEXT NOT NULL
  -> );
Query OK, 0 rows affected (0.040 sec)
MariaDB [(none)]> Ctrl-C -- exit!
Aborted
(vapp3) [x]-[hasan@parrot]~/Desktop/git_prac/python_app_deployment/python-micro-service/document_app
└─$ streamlit run app3.py
You can now view your Streamlit app in your browser.
Local URL: http://localhost:8501
Network URL: http://192.168.0.106:8501
```



Run on VM

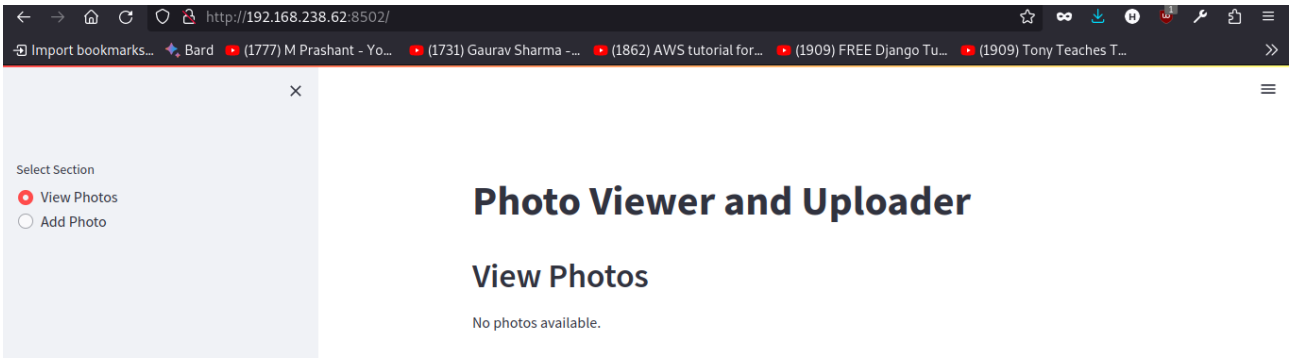
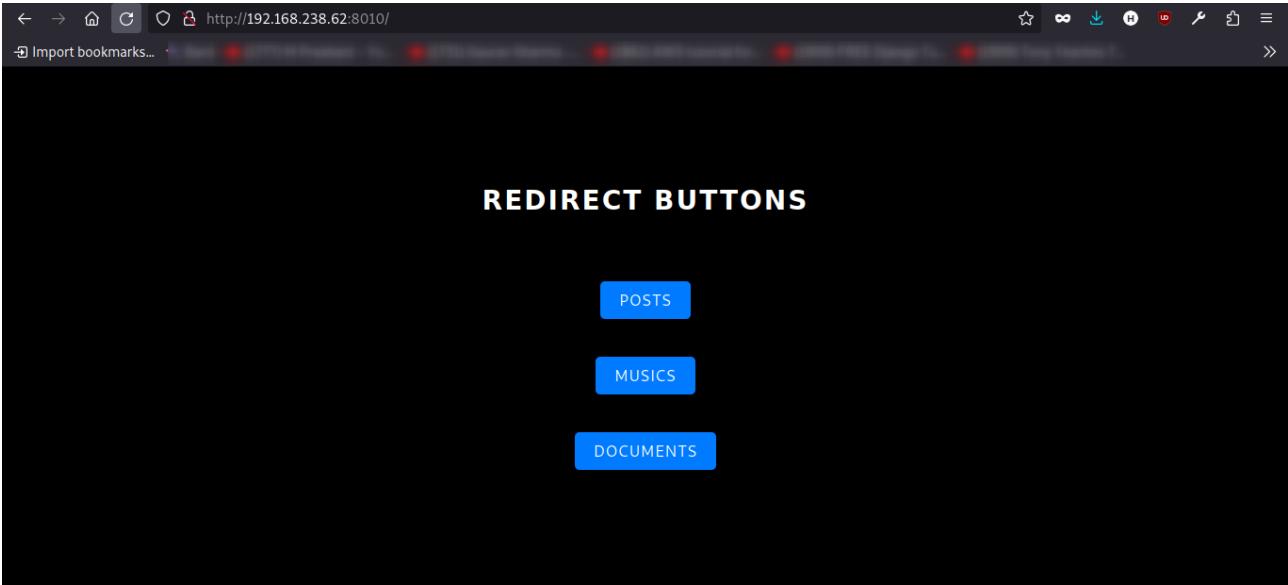


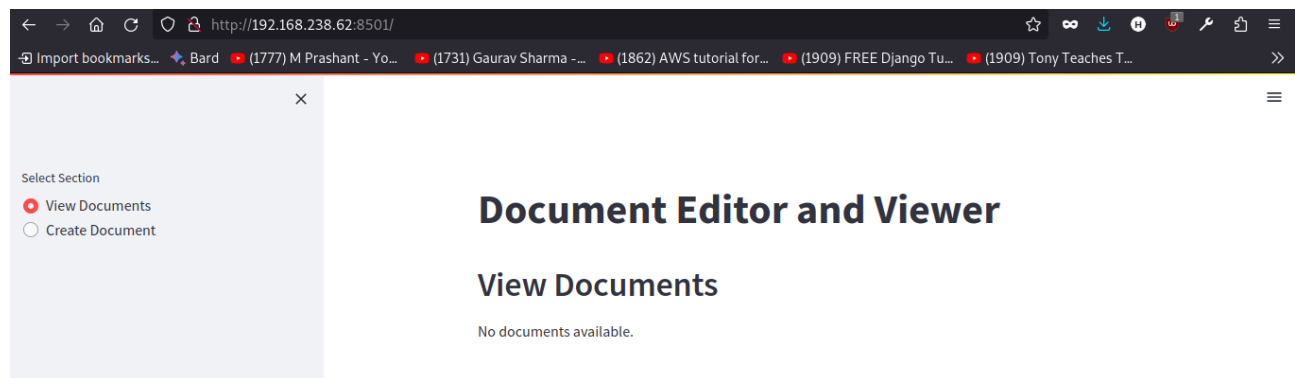
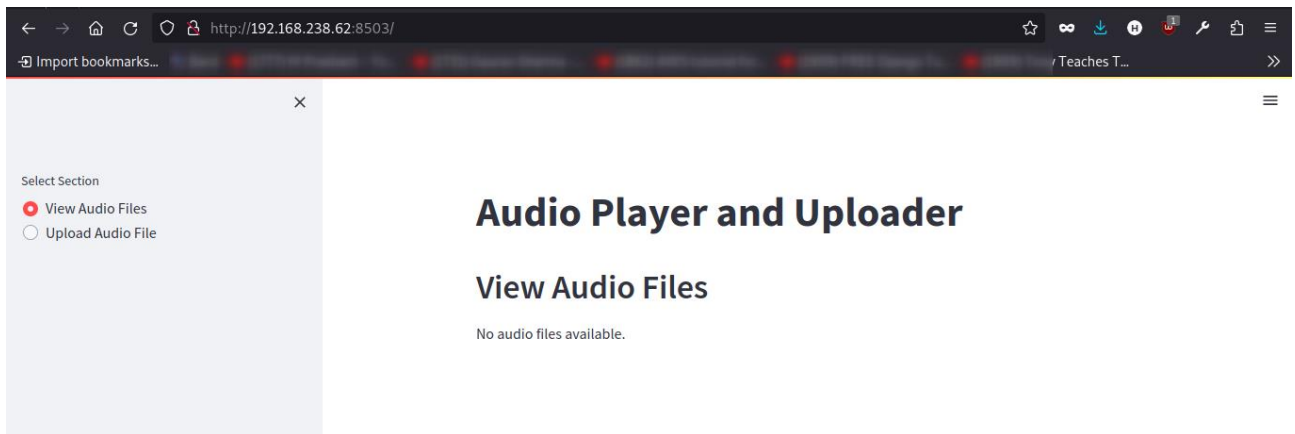
Movies Search

Search by Year of Release: Search

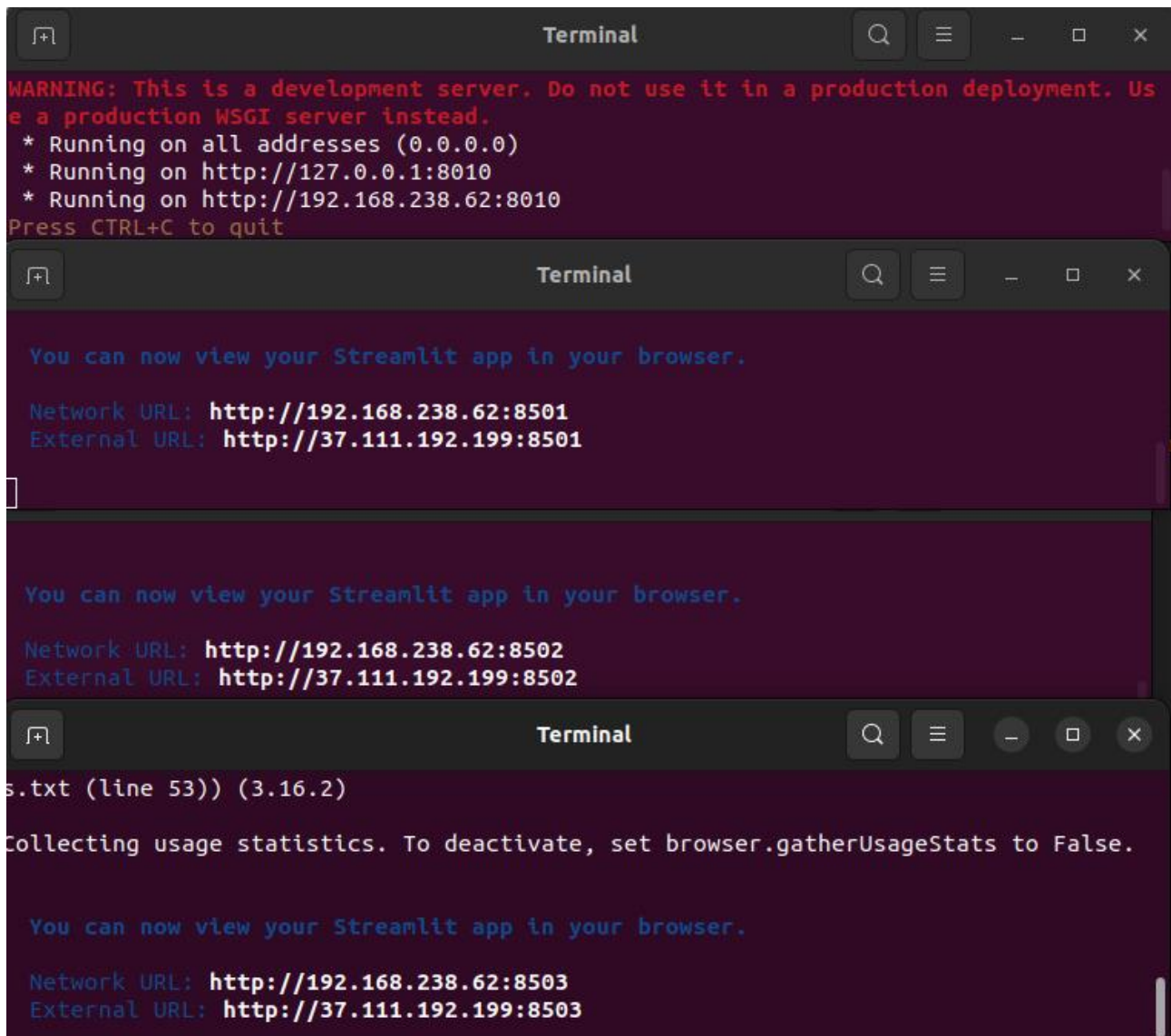
Search Results:

Movie Name Year of Release Box Office Director Producer Cast





```
(vFlask) hasan@hasan-HP-EliteBook-820-G1:~/Desktop/python_app_deployment$ ls
'database table create.txt'  python-micro-service  shell.sh
python-fast-app              README.md
(vFlask) hasan@hasan-HP-EliteBook-820-G1:~/Desktop/python_app_deployment$ ./shell.sh
```



The image displays three terminal windows stacked vertically, each showing the output of a Streamlit application. The top window shows a warning about using a development server and lists the addresses it is running on. The middle window shows the network and external URLs for the app. The bottom window shows the same information but with a different port number (8503).

```
Terminal
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:8010
* Running on http://192.168.238.62:8010
Press CTRL+C to quit

Terminal
You can now view your Streamlit app in your browser.

Network URL: http://192.168.238.62:8501
External URL: http://37.111.192.199:8501

Terminal
You can now view your Streamlit app in your browser.

Network URL: http://192.168.238.62:8502
External URL: http://37.111.192.199:8502

Terminal
s.txt (line 53)) (3.16.2)
Collecting usage statistics. To deactivate, set browser.gatherUsageStats to False.

You can now view your Streamlit app in your browser.

Network URL: http://192.168.238.62:8503
External URL: http://37.111.192.199:8503
```

One command run the all microservice app