

Simple Web Service – Documentation

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1. Objective

Implement a web service that scrapes an image of the user's choice on the Pond5 website and also provides the following REST APIs:

- Get /ping: Returns “pong”
- Get /system: Returns a JSON object containing information about the web-service and system properties
- Get /mediainfo/<id> : Returns a JSON object containing information about an image based on the <id> is provided by the user

2. Requirements and Installation

Following are the requirements for running the web-service on your local machine:

Language	Python 3
Python Version	Any Python 3.x.x version will work
Web Application Framework	Flask
Web Scraping	BeautifulSoup
Additional frameworks	Bootstrap

Flask Installation:

```
pip install -U Flask
```

BeautifulSoup Installation:

```
pip install beautifulsoup4
```

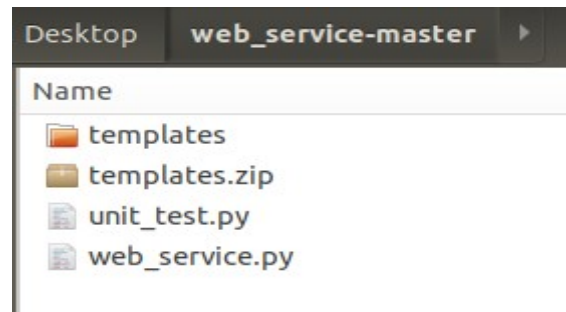
Other python packages (if not present):

```
pip install <package name>
```

Note: Ensure connectivity to the internet for scraping the image.

3. Running the Web Service

- Download the zip file for code repository from the URL: https://github.com/girijashingte/web_service.git
- Unzip the file and you will get a folder with three files: web_service.py, unit_test.py, templates.zip. For understanding purpose, let this folder be **web_service-master**.
- Unzip the templates folder within **web_service-master** folder.
- Ensure that web_service.py, unit_test.py, and templates folder (unzipped) are all in the same folder/directory (**web_service-master**)



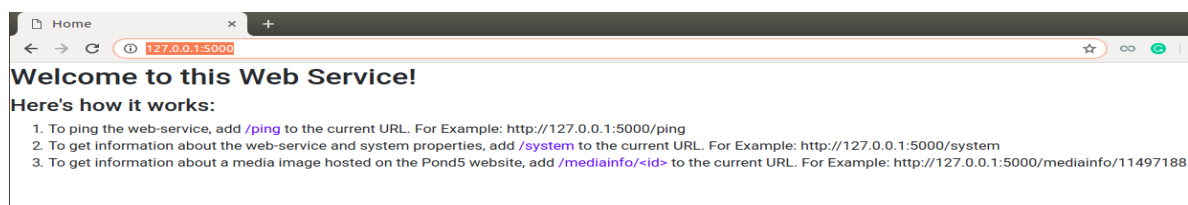
- From your command prompt, navigate to the folder/directory where **web_service-master** was unzipped
- To run the web service, type the following command:

```
python web_service.py
```

- If you are not redirected to your browser automatically, copy the URL that appears in the command prompt and paste it in your browser:

```
* Serving Flask app "web_service" (lazy loading)
* Environment: production
  WARNING: Do not use the development server in a production environment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

- You will first see the homepage



- By adding /ping to current URL, you can ping the web-service
- By adding /system to current URL, you can get the system properties and web-service information
- By adding /mediainfo/<id> to the current URL, you can get information about an image on the Pond5 website

4. Test Cases

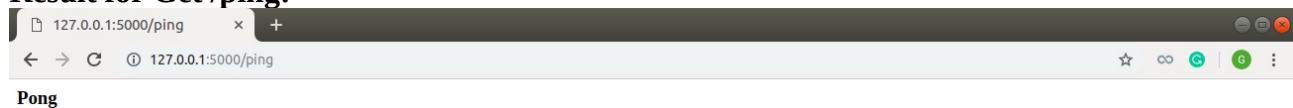
Below test-cases have been executed to check the functionality of the web-service:

Sr No	Scenario	Expected Outcomes	Actual Outcome	Result
1	Correct URL for home-page	No Exceptions	No Exceptions	Pass
2	Incorrect URL for home-page	AssertionError	AssertionError	Pass
3	Correct URL for /ping	No Exceptions	No Exceptions	Pass
4	Incorrect URL for /ping	AssertionError	AssertionError	Pass
5	Correct URL for /system	No Exceptions	No Exceptions	Pass
6	Incorrect URL for /system	AssertionError	AssertionError	Pass
7	Correct URL for /mediainfo/<id>	No Exceptions	No Exceptions	Pass
8	Incorrect URL for /mediainfo/<id>	AssertionError	AssertionError	Pass

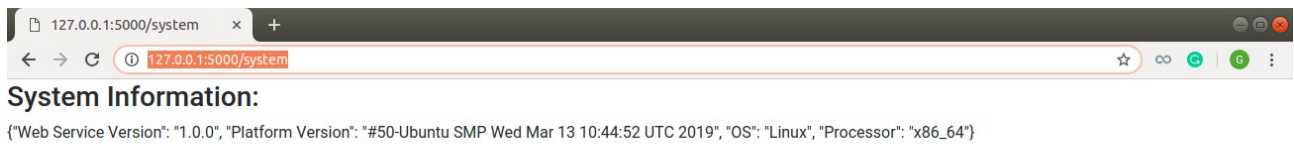
Note: To run the unit_test.py, ensure that web_service.py file is running in the background.

5. Results and Conclusion

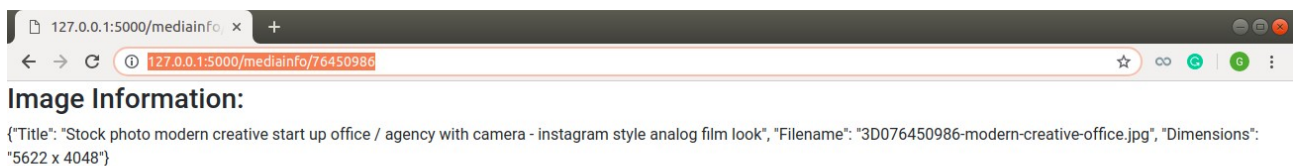
Result for Get /ping:



Result for Get /system:



Result for Get `/mediainfo/<id>`:



Thus, the objectives for developing the web-service have been achieved successfully.

6. References

- Udemy (n.d.). *Python and Flask Bootcamp: Create Websites using Flask!*. [video] Available at: <https://www.udemy.com/course/python-and-flask-bootcamp-create-websites-using-flask/>

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- Stack Overflow. (2019). Stack Overflow - Where Developers Learn, Share, & Build Careers. [online] Available at: <https://stackoverflow.com/>
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