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# Lab 6 Test Report

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## Purpose

This document serves to cover the test scenarios used to evaluate the SDEV 300 Lab 6 application as well as the source code compliance to PEP 8 Code Styling.

## Overview

This testing focused on navigating the various routes of the Python Flask based web interface. The application is accessible from the localhost:5000 URL after the web server is started by issuing “python wsgi.py” from within the Lab6 directory. There are three original pages that exist:

1. index.html
2. server\_time.html
3. utc.html

Pages 2 and 3 may be accessed via page 1 (index.html) which is the root route of the site. Each HTML template extends base.html which utilizes background image “bigben.png” and links with base.css and favicon.ico

The site topic is time, and index.html provides an ordered list of external resources for knowledge on time that is nested within an unordered list.

The web interface aimed to use each HTML component called out in the Lab 6 requirements.

## Code Style Guide

On Lab 6, I utilized the PyCharm IDE for development. PyCharm enabled me to write compliant code during development and each pylint evaluation received a score of 10.00.

Below is a copy - paste of the pylint evaluation of wsgi.py source code.

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Your code has been rated at 10.00/10 (previous run: 10.00/10, +0.00)

## Test Scenarios

Below is an overview of the test scenarios, the purpose of each test, the expected result, the final result, and the associated figure where a screenshot may be viewed.

Test Case	Purpose	Expected Result	Final Result	Figure
Test 1 - WSGI Server Starts Without Error	Demonstrate that the Flask based web server can start and run without failure upon launch	The Flask server starts and does not report an error or issue	Pass	Figure 1
Test 2 - Root Route Page Rendering Without Error	Demonstrate that the index.html page may be viewed without error via web browser	The web browser displays the page as designed	Pass	Figure 2
Test 3 - Server Time Route Rendering Without Error	Demonstrate that when the appropriate link is clicked from the root route, the server_time.html page may be viewed without error via web browser	The web browser routes to the server_time route and displays the server_time.html page as designed	Pass	Figure 3
Test 4 - UTC Time Route Rendering Without Error	Demonstrate that when the appropriate link is clicked from the root route, the utc_time.html page may be viewed without error via web browser	The web browser routes to the utc_time route and displays the utc_time.html page as designed	Pass	Figure 4
Test 5 - HREF Links to External Pages May Be Called From The Root Route	Demonstrate that each of the three links, provided via HREF from index.html, properly resolve when selected from the index.html page	The web browser properly navigates to and resolves each of the external web pages as selected from the root route / index.html	Pass	Figure 5 Figure 6 Figure 7

Figure 1: Test 1 - WSGI Server Starts Without Error

```
^C(venv) lindell@lindell:~/PycharmProjects/SDEV300/Lab6$ python wsgi.py
* Serving Flask app "wsgi" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 151-945-077
127.0.0.1 - - [21/Feb/2021 14:21:39] "GET / HTTP/1.1" 200 -
```

Figure 2: Test 2 - Root Route Page Rendering Without Error



Figure 3: Test 3 - Server Time Route Rendering Without Error



Figure 4: Test 4 - UTC Time Route Rendering Without Error



Figure 5: Test 5 - HREF Links to External Pages Called From Root Route

The screenshot displays a web browser window at the URL `timeanddate.com/worldclock/`. The page features the site's logo, navigation links (Home, Time Zones, World Clock), and a search bar. The main content area is titled "The World Clock — Worldwide" and includes a section for "My Cities (Personal World Clock)" with four clock faces for Baltimore, New York, London, and Tokyo. Below this, there are links for "Popular Lists" such as Africa, North America, South America, Asia, Australia/Pacific, Europe, and Capitals.

Below the browser window, a terminal window is open, showing the output of a Python application. The terminal output includes the following text:

```
Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
Debug mode: on
Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
Restarting with stat
Debugger is active!
Debugger PIN: 151-945-077
127.0.0.1 - - [21/Feb/2021 14:21:39] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 14:55:18] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 15:02:00] "GET /server_time HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 15:06:37] "GET /utc_time HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 15:15:21] "GET / HTTP/1.1" 200 -
```



Figure 6: Test 5 - HREF Links to External Pages Called From Root Route

The screenshot shows a web browser window with the URL `en.wikipedia.org/wiki/Unix_time`. The page displays the Wikipedia article for "Unix time". The article text includes: "Unix time (also known as **Epoch time**, **POSIX time**,<sup>[1]</sup> **seconds since the Epoch**,<sup>[2]</sup> or **UNIX Epoch time**<sup>[3]</sup>) is a system for describing a point in time. It is the number of seconds that have elapsed since the Unix epoch, minus leap seconds; the Unix epoch is 00:00:00 UTC on 1 January 1970 (an arbitrary date); leap seconds are ignored,<sup>[4]</sup> with a leap second having the same Unix time as the second before it, and every day is treated as if it contains exactly 86 400 seconds.<sup>[2]</sup> Due to this treatment Unix time is not a true representation of UTC.

Below the article text, there is a "Contents" section with a link to "1 Definition".

On the right side of the article, there is a box titled "Current Unix time" showing the value 1613938384 (update) and the timestamp (2021-02-21T20:13:04+00:00). Below this is a digital clock display showing 03:46:18 on 2001-09-09, with a note that Unix time passed 1 000 000 000 seconds on 2001-09-09T01:46:40Z.

Below the browser window, a terminal window is open, showing the output of a command. The terminal output includes:

```
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 151-945-077
127.0.0.1 - - [21/Feb/2021 14:21:39] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 14:55:18] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 15:02:00] "GET /server_time HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 15:06:37] "GET /utc_time HTTP/1.1" 200 -
127.0.0.1 - - [21/Feb/2021 15:15:21] "GET / HTTP/1.1" 200 -
```

Figure 7: Test 5 - HREF Links to External Pages Called From Root Route

