

Lab 7

Terrence Jackson

SDEV 300: Building Secure Python Applications

Professor Howard

Apr 30, 2024

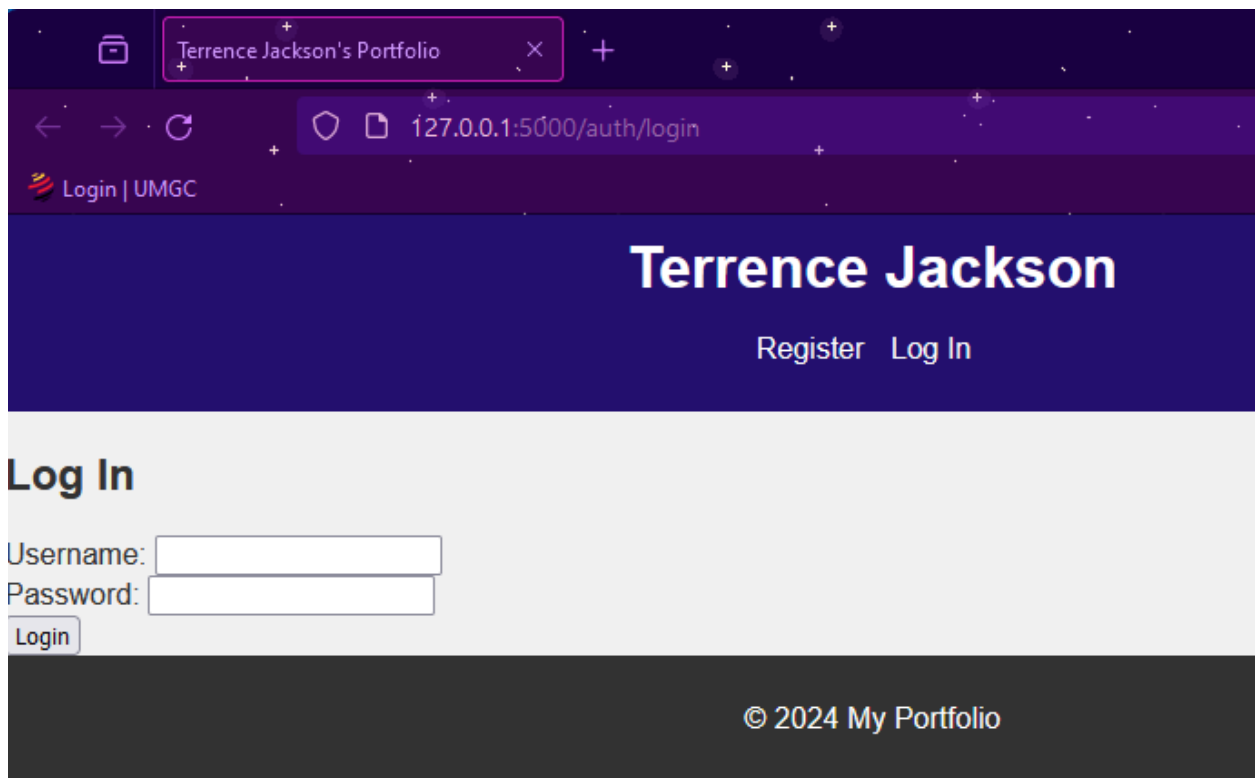
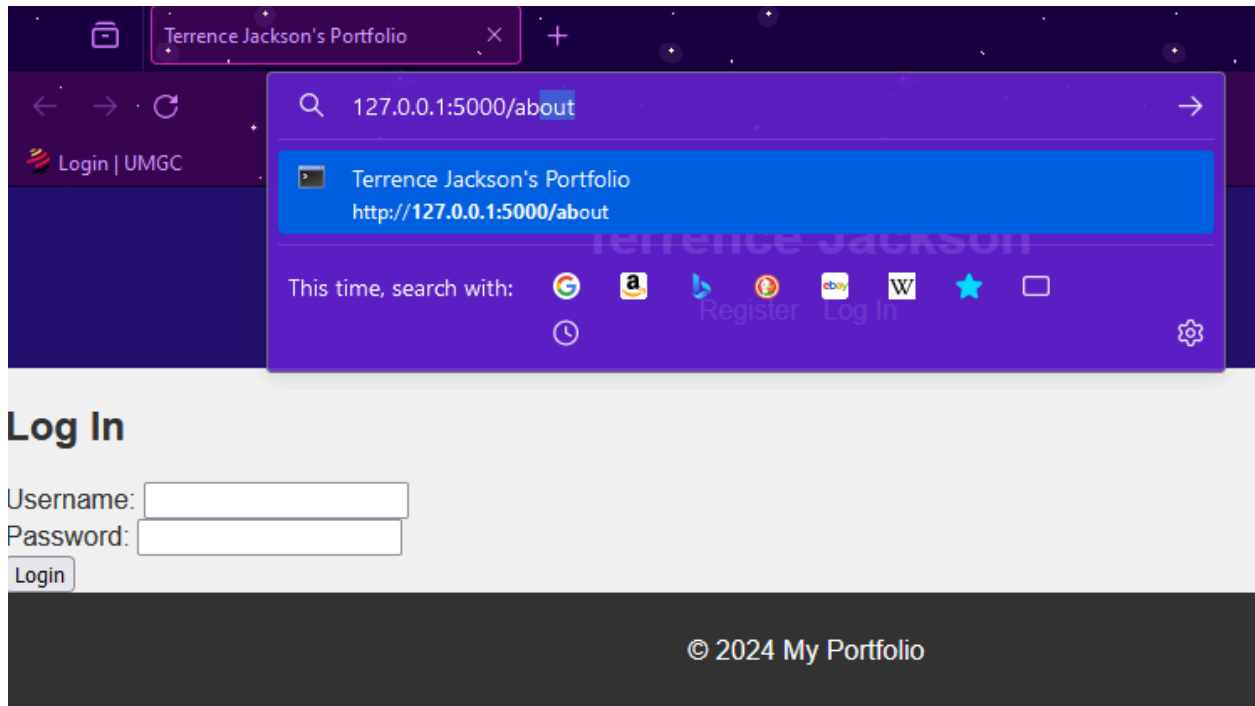
Flask Application

Test Cases

	Input	Expected	Actual	Pass?
1: access restricted w/o log in	http://127.0.0.1:5000/about	Redirect to home page	Redirect to home page	Yes
2: log in w/o register	http://127.0.0.1:5000/auth/login Username: User1 Password: ABC123*def!@	Flash error message	Incorrect Username or Password	Yes
3: register	Click the register navigation button Username: User1 Password: ABC123*def!@	Redirect to login page	Redirect to login page	Yes
4: register w/short password	Username: User2 Password: pass	Flash error message	Password is too short! It must be at least 12 characters long.	Yes
5: register w/bad password	Username: User2 Password: Password1234	Flash error message	Password must include at least 1 uppercase character, 1 lowercase character, 1 number and 1 special character	Yes

6: register with only username or password	http://127.0.0.1:5000/auth/register Click register submit button	Form does not move forward, browser specific	Firefox re-prompts me to put in username and/or password	Yes
7: re-register same user	Username: User1 Password: abc123*DEF!@	Flash error message	User User1 is already registered.	Yes
8: log in w/bad data	Username: User1 Password: pass	Flash error message	Incorrect Username or Password	Yes
9: successful log in	Click the Log In navigation button Username: User1 Password: ABC123*def!@	Redirect to landing page	Redirect to landing page	Yes
10: images	Log in, view image on landing page, click about navigation button, view images on about page	See the images on the pages	See the images on the pages	Yes
11: table	http://127.0.0.1:5000/resume	See the table	See the table	Yes
12: log out	Click Log Out button http://127.0.0.1:5000/contact	Redirect to login page	Redirect to login page	Yes

Test Case 1:



Test Case 2:

The screenshot shows a web browser window with the address bar displaying "127.0.0.1:5000/auth/login". The page has a dark blue header with the text "Login | UMGC" on the left and "Terrence Jac" on the right. Below the header, there are links for "Register" and "Log In". A prominent red error message states "Incorrect Username or Password". Below this, the "Log In" section contains input fields for "Username:" (with "User1" entered) and "Password:" (with masked characters). A "Login" button is positioned below the password field. The footer of the page includes the copyright notice "© 2024 My Portfol".

← → ↻ 127.0.0.1:5000/auth/login

Login | UMGC

Terrence Jac

Register Log In

Incorrect Username or Password

Log In

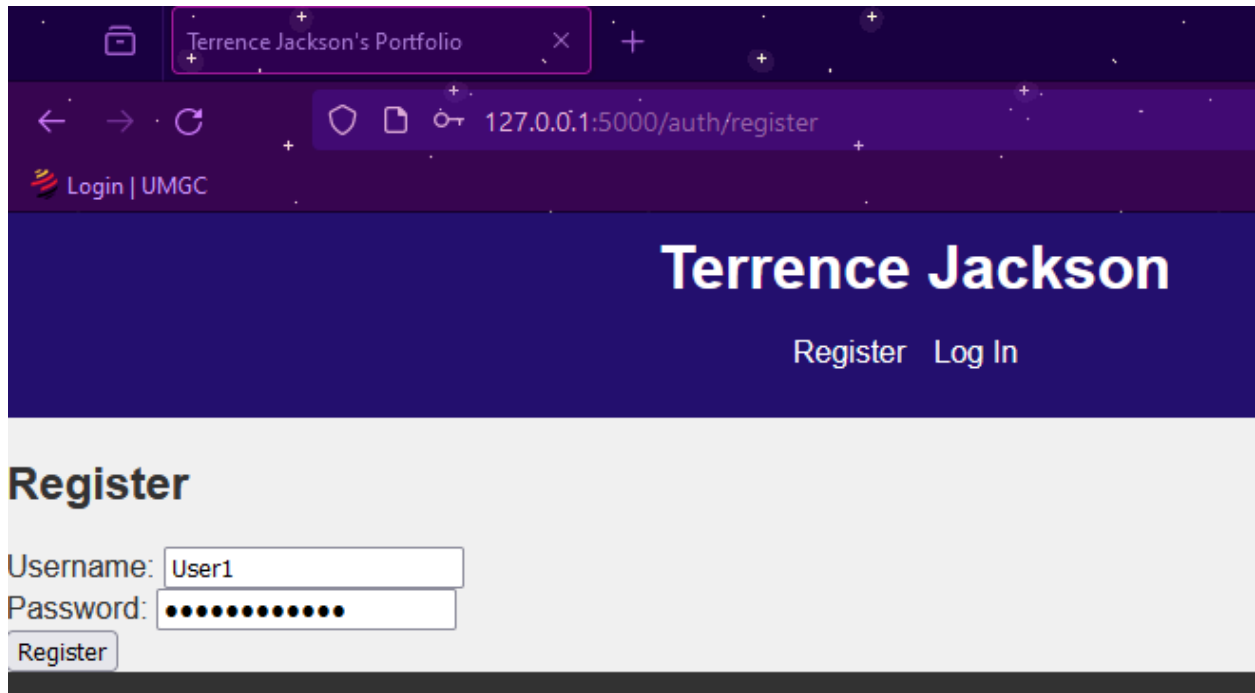
Username:

Password:

Login

© 2024 My Portfol

Test Case 3:



A screenshot of a web browser showing the registration page for 'Terrence Jackson'. The browser's address bar displays '127.0.0.1:5000/auth/register'. The page has a dark blue header with the name 'Terrence Jackson' and links for 'Register' and 'Log In'. Below the header, the word 'Register' is prominently displayed. The registration form includes a 'Username' field with 'User1' entered, a 'Password' field with masked characters, and a 'Register' button.

Terrence Jackson's Portfolio

127.0.0.1:5000/auth/register

Login | UMGC

Terrence Jackson

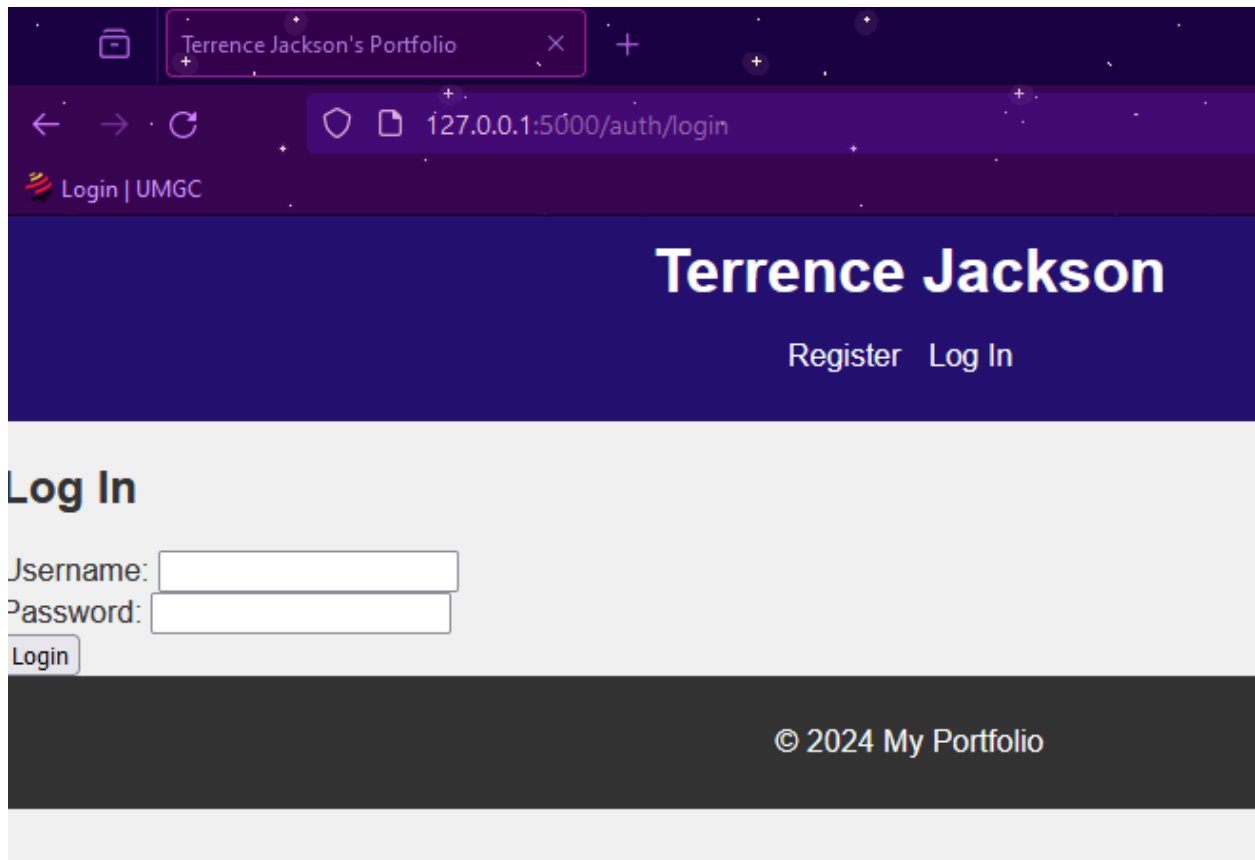
Register Log In

Register

Username:

Password:

Register



A screenshot of a web browser showing the login page for 'Terrence Jackson'. The browser's address bar displays '127.0.0.1:5000/auth/login'. The page has a dark blue header with the name 'Terrence Jackson' and links for 'Register' and 'Log In'. Below the header, the word 'Log In' is prominently displayed. The login form includes a 'Username' field, a 'Password' field, and a 'Login' button. At the bottom of the page, there is a footer that reads '© 2024 My Portfolio'.

Terrence Jackson's Portfolio

127.0.0.1:5000/auth/login

Login | UMGC

Terrence Jackson

Register Log In

Log In

Username:

Password:

Login

© 2024 My Portfolio

Test Case 4:

The screenshot shows a web registration form with a dark blue header bar at the top. Below the header is a light gray bar, followed by a red error message bar that reads: "Password is too short! It must be at least 12 characters long." Below the error message is the "Register" section, which includes the title "Register" in bold, a "Username:" label with a text input field, a "Password:" label with a text input field, and a "Register" button. At the bottom of the form is a dark gray footer bar containing the text "© 2024 My Portfolio".

Register

Username:

Password:

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Test Case 5:

The screenshot shows a web registration form with a dark blue header bar at the top. Below the header is a light gray bar, followed by a red error message bar that reads: "Password must include at least 1 uppercase character, 1 lowercase character, 1 number and 1 special character". Below the error message is the "Register" section, which includes the title "Register" in bold, a "Username:" label with a text input field, a "Password:" label with a text input field, and a "Register" button. At the bottom of the form is a dark gray footer bar.

Register

Username:


Password:

Test Case 6:

Register

Username:

Password:


 Protect your email address:
Use Firefox Relay email mask

Manage Passwords

Register

Username:

Password:

 Use a Securely Generated Password
np:jHqGuK&;>w95
Firefox will save this password for this website.

Manage Passwords

Test Case 7:

User User1 is already registered.

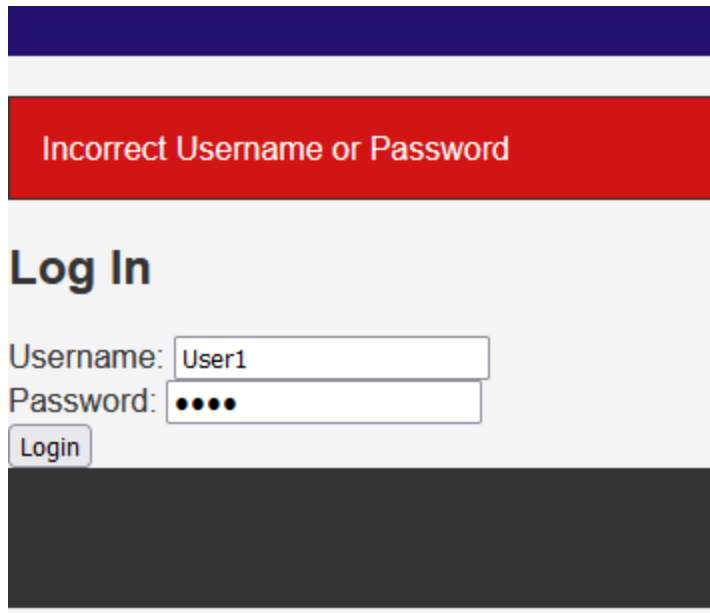
Register

Username:

Password:

© 2024 My Portfolio

Test Case 8:



The image shows a web application interface for logging in. At the top, there is a dark blue header bar. Below it is a red banner with the text "Incorrect Username or Password" in white. Underneath the banner is a light gray section containing the "Log In" title. Below the title are two input fields: "Username:" with the value "User1" and "Password:" with four black dots. A "Login" button is positioned below the password field. The bottom of the page is a dark gray footer bar.

Incorrect Username or Password

Log In

Username:

Password:

Login

Test Case 9:

Terrence Jackson

[Register](#) [Log In](#)

Log In

Username:

Password:

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Terrence Jackson's Portfolio

← → ↺ 127.0.0.1:5000 ☆

Login | UMGC

Terrence Jackson

[Home](#) [About](#) [Resume](#) [Contact](#) [Log Out](#)

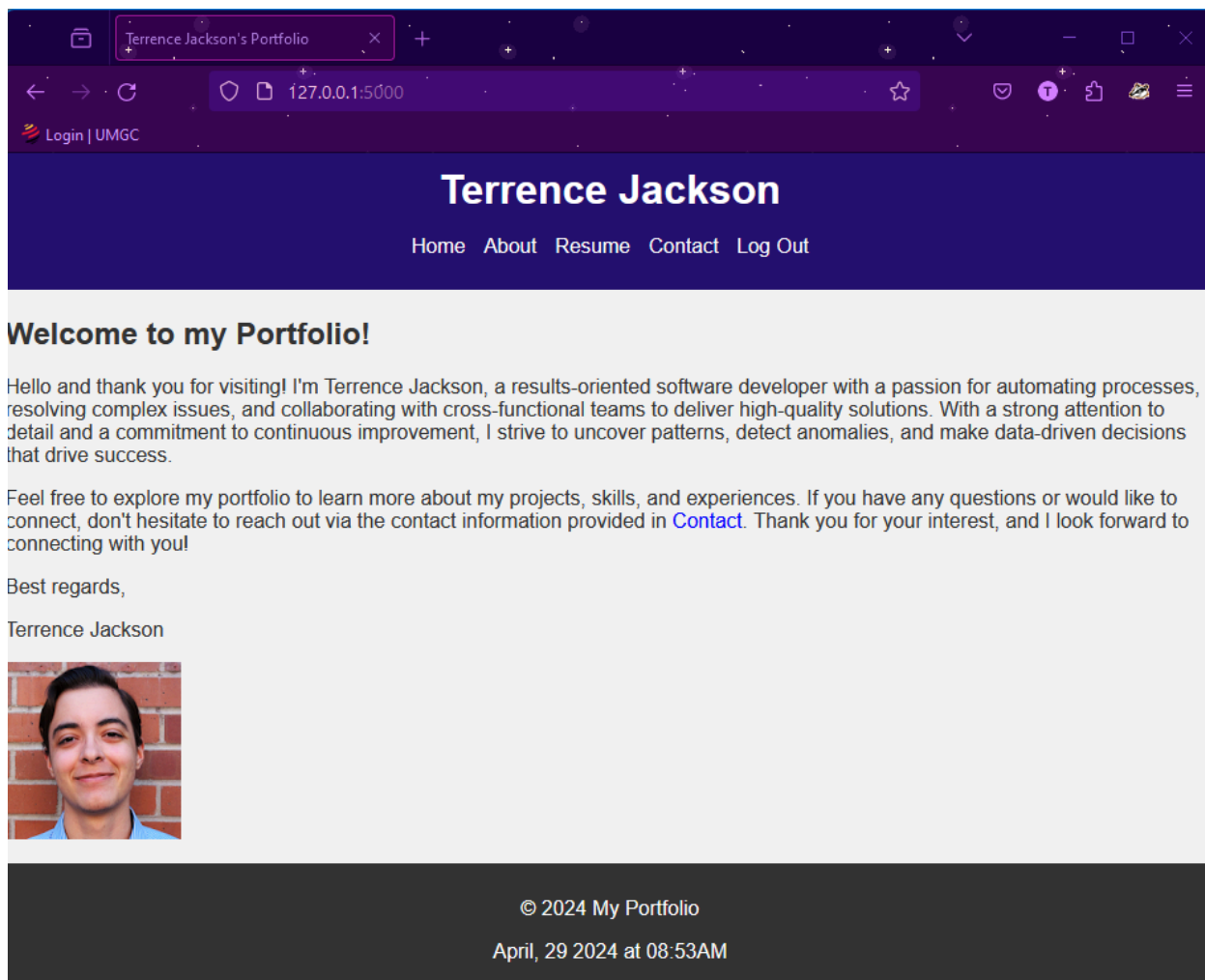
Welcome to my Portfolio!

Hello and thank you for visiting! I'm Terrence Jackson, a results-oriented software developer with a passion for resolving complex issues, and collaborating with cross-functional teams to deliver high-quality solutions. With detail and a commitment to continuous improvement, I strive to uncover patterns, detect anomalies, and make that drive success.

Feel free to explore my portfolio to learn more about my projects, skills, and experiences. If you have any questions or want to connect, don't hesitate to reach out via the contact information provided in [Contact](#). Thank you for your interest in connecting with you!

Best regards,

Test Case 10:



The image is a screenshot of a web browser displaying a portfolio website. The browser's address bar shows the URL '127.0.0.1:5000'. The website has a dark blue header with the name 'Terrence Jackson' in white. Below the name is a navigation menu with links: 'Home', 'About', 'Resume', 'Contact', and 'Log Out'. The main content area has a light gray background and starts with the heading 'Welcome to my Portfolio!'. This is followed by a paragraph of text about the user's background as a software developer. Below this is another paragraph inviting visitors to explore the portfolio and contact information. The text 'Best regards,' is followed by the name 'Terrence Jackson' and a small portrait photo of a man with dark hair against a brick wall. The footer is a dark gray bar containing the copyright notice '© 2024 My Portfolio' and the timestamp 'April, 29 2024 at 08:53AM'.

Terrence Jackson's Portfolio

127.0.0.1:5000

Login | UMGC

Terrence Jackson

Home About Resume Contact Log Out


Welcome to my Portfolio!

Hello and thank you for visiting! I'm Terrence Jackson, a results-oriented software developer with a passion for automating processes, resolving complex issues, and collaborating with cross-functional teams to deliver high-quality solutions. With a strong attention to detail and a commitment to continuous improvement, I strive to uncover patterns, detect anomalies, and make data-driven decisions that drive success.

Feel free to explore my portfolio to learn more about my projects, skills, and experiences. If you have any questions or would like to connect, don't hesitate to reach out via the contact information provided in [Contact](#). Thank you for your interest, and I look forward to connecting with you!

Best regards,

Terrence Jackson



© 2024 My Portfolio

April, 29 2024 at 08:53AM

127.0.0.1:5000/about


Login | UMGC

positive impact.

Hobbies


Outside of my professional endeavors, I enjoy engaging in a variety of h provide me with opportunities to unwind, explore new interests, and mai

- *Reading:*

A man with glasses and a beard is sitting and reading a red book. He is wearing a dark shirt and a green sleeve is visible.


I have a passion for literature and enjoy immersing myself in thoug literature to sci-fi, I find solace in the pages of a good book. I am c

- *Crochet:*

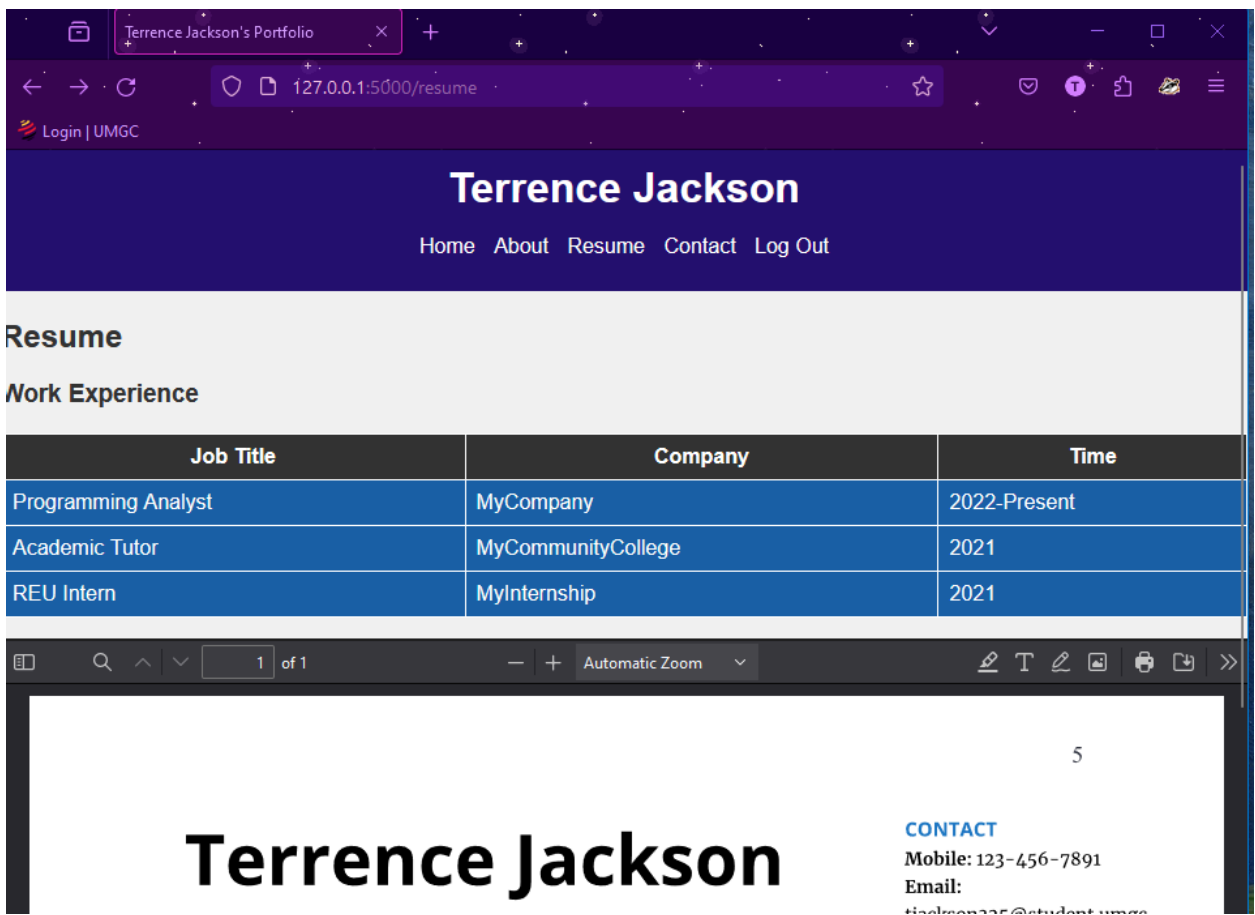
A close-up of hands crocheting with red yarn using a white crochet hook. The background is dark.

Crocheting allows me to unleash my creativity and create beautiful or intricate [Amigurumi](#) toys, I find joy in working with yarn and bring

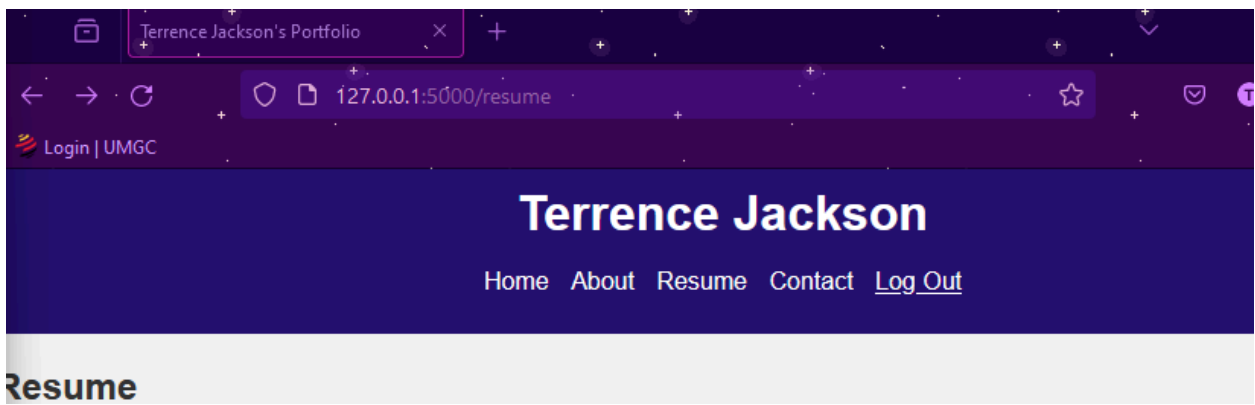
- *Baking:*

A top-down view of baking ingredients and tools on a white surface. It includes a blue egg carton with brown eggs, a small bowl of brown powder, a sifter with white powder, a whisk, and a bowl of orange liquid. A watermark 'shutterstock.com - 193813063' is at the bottom.

Test Case 11:



Test Case 12:



The screenshot shows a web browser window with a single tab titled "Terrence Jackson's Portfolio". The address bar displays the URL "127.0.0.1:5000/auth/login". Below the address bar, there is a navigation bar with a "Login | UMG" link. The main header area is dark blue and features the name "Terrence Jackson" in large white text, with "Register" and "Log In" links below it. The "Log In" section has a light gray background and contains labels for "Username:" and "Password:" next to input fields. A "Login" button is positioned below the password field. The footer is a dark gray bar with the text "© 2024 My Portfolio".

Terrence Jackson's Portfolio

127.0.0.1:5000/auth/login

Login | UMG

Terrence Jackson

Register Log In

Log In

Username:

Password:

Login

© 2024 My Portfolio

Pylint

In this lab, I used the Flask documentation listed in my references to help me re-organize my project and implement authentication. Following their tutorial, I set up an `__init__` file to make my project a package. I did later choose to go the route of using a `run.py` file instead of following the tutorial exactly. However, I did keep that init file, and ended up adding one for the outer `lab_7` folder as well. An added benefit of this was that it made it easier to run `pylint` on my whole project in one command. However, I ran into some issues with managing circular imports when Pylint flagged import statements that weren't at the top of the file. I had imports in different places in order to avoid a circular import with `auth.py` and the `AUTH_PICKLE` variable. The easiest solution to appease Pylint and ensure my pickle variable was still accessible was to move it from the portfolio init into the `lab_7` init. I can't imagine it will be needed outside the portfolio package for this project. However, if I were to flesh this out in the future, it could be useful to have the pickle variable accessible to test cases in a `lab_7/test` folder.

There is still one Pylint error in my code that I have chosen to leave in. In `auth.py`, I have a function `before_request()` that executes before any request to the endpoints in the routes blueprint. This function ensures that a user is logged in before rendering any of the other pages, and redirects to the login page if the user is not logged in. In this function, it is only necessary to return a value if the user isn't logged in and needs to be redirected. Any other request is acceptable and should not be affected or manipulated. Due to this logic, there is only a return statement/value for one branch of the logic. Pylint flags this as an inconsistent return statement, but because this is my intention, I am leaving it as is.

References

Tutorial. Flask Documentation (3.0.x). (n.d.). <https://flask.palletsprojects.com/en/3.0.x/tutorial/>