Module 1: Personal Website

JHU EP 605.256 – Modern Software Concepts in Python

Introduction

This assignment will teach you the fundamentals of website construction. You will construct a personal developer website that includes a biography, contact information/links, and information about your python projects. This will give you a chance to both be creative and learn the fundamentals of website development.

You will practice working with Flask – a micro web framework written in Python. You will also build upon the html skills taught in module 1, and you will work with cascading style sheets (CSS) to describe how HTML elements are to be displayed. Your resultant output should be a functional personal website that includes details about you, your projects, and contact information.

Skills: Flask, HTML Searching Methods, Data Cleaning, JSON Data Object Storage

Assignment Overview

In this assignment you will:

1. Construct a flask website to display your completed modules (and other related work if you'd like!)
2. Submit associated deliverables on-time and with the appropriate structure to both canvas and github.

1. Set Up Your Git Environment

Using Git for source control is a very important, common development practice. For this assignment, you must use Git/GitHub to store your code as you develop your solution. **Please do not write all your code locally and paste/push it into your Git repo once complete. Rather, you'll want to commit/push updates frequently as you write your code. You will be asked to submit a screenshot of your GitHub history later in the Assignment under the 'Deliverables' section.**

Instructions with more details to carry out this task have been provided with more detail within the 'Set Up Github' document under 'Course Information'.

1. Register for a GitHub account if you do not have one or wish to create a course-specific account.
2. Add the instructor and grader public SSH keys to your GitHub account
    a. Our public SSH keys are available on Canvas under "Set Up Github" document
3. Create an SSH key using 'ssh-keygen' in your terminal (or a different key generation scheme / desktop client of your own choosing) and add it to your GitHub account
4. Create a new repository within your GitHub account named: jhu_software_concepts with a folder named module_1
5. Initialize a Git repository and clone it to your local machine.
6. You can now add files and begin developing your solution in your version-controlled environment!

2. Programming Assignment Requirements

A common way to organize requirements is into a **SHALL**, **SHOULD, SHALL NOT** list. Requirements for your homework assignment are under this structure and give you development freedom over how to implement – if it conforms to the Shall/Should/Shall Not list.

SHALL: A high priority requirement that must be implemented as an essential part of this requirement and will otherwise result in an unsatisfactory "program correctness" grade within our assignment matrix within the syllabus.

SHOULD: A low priority requirement that will result in a good/excellent "program correctness" grade if implemented.

SHALL NOT: A forbidden component of this assignment. This list does not include items specifically mentioned on the syllabus under academic integrity, but the expectation is that those areas are similarly respected.

For this assignment your solution:

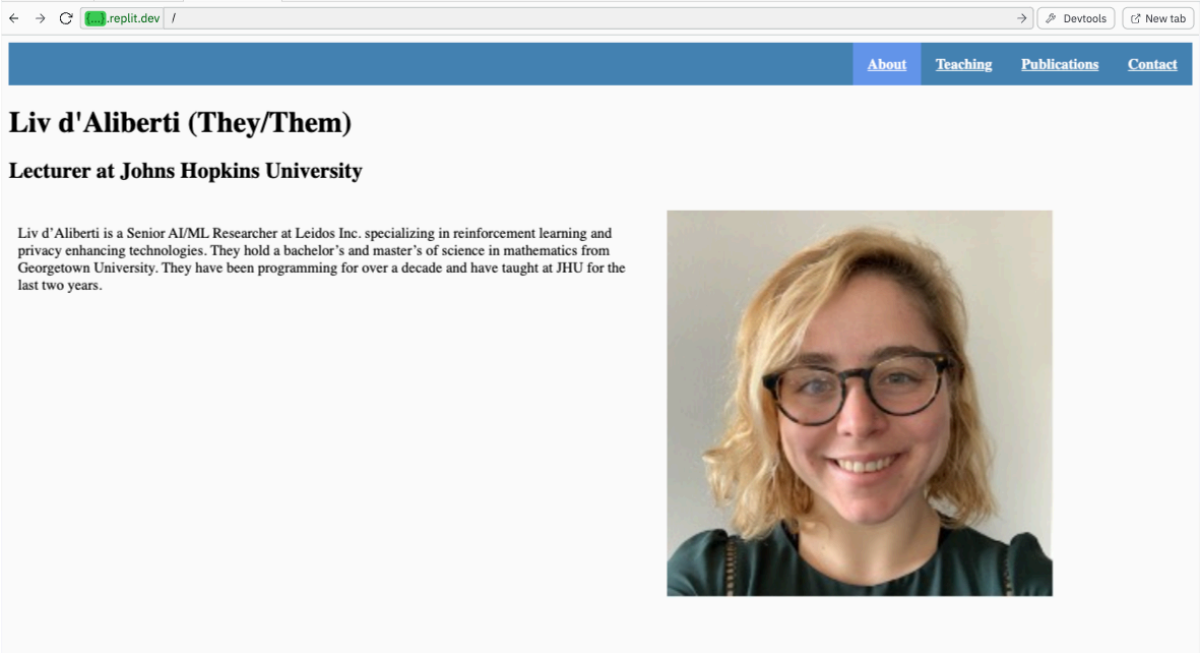
- **SHALL** use Flask as your web framework
- **SHALL** have the following web pages:
    - /
        - Your homepage
        - Include your name
        - Include your position
        - Provide a bio
        - Include a picture
        - Bio text on the left, image on the right
    - /contact
        - Include your email address
        - Include your LinkedIn information
    - /projects (or /publications)
        - Include a link to your M1 Project Github
        - Include your M1 project title
        - Include details about your M1 Project
- **SHALL** have a navigation bar

    - **SHALL** be able to access each of your pages from other pages within the navigation bar
    - **SHALL** be located on the top right corner of each web screen
    - **SHALL** show current tab as a highlighted tab
    - **SHALL** be colorized (with a different color from the rest of the page)
- **SHALL** be able to start your web application using command **$python run.py**
- **SHALL** be available on Github within a private repository called **jhu_software_concepts** within a folder named **module_1.**
- **SHALL** include a requirements.txt file that allows complete reconstruction of your environment.
- **SHALL** use python 3.10+
- **SHALL** include a README within your solution folder that includes instructions covering how to run your site.
- **SHALL** include screenshots of your running site saved as a pdf within your **module_1** folder.
- **SHOULD** use blueprints to control pages
    - Requires sub-pages module
- **SHOULD** use css to manipulate format / color / spacing of objects
- **SHOULD** use HTML templates for each webpage
- **SHOULD** include **static** and **templates** folders
- **SHOULD** be well commented, clear, with appropriately named variables.

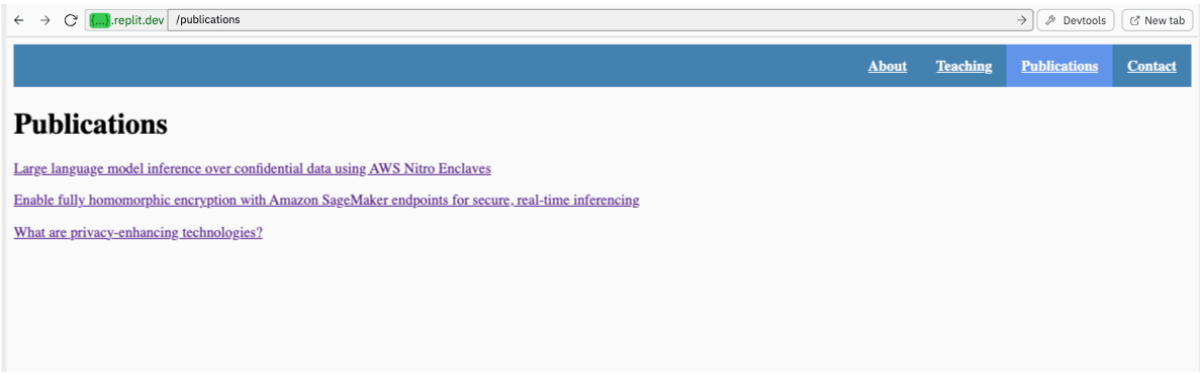
Sample Website Pages

Here are screenshots from our example site that you should consider as a baseline template:

Home Screen:



Publications (where you will link to your projects):



Contact:

After this assignment, you will have a personal website to display your future projects, contact information, and about information.

Please post to your github ahead of the deadline. Github files should also be submitted through Canvas so graders can use the timestamp of the submitted files. Instructors will check date / time of final push to confirm all materials were submitted on time.

Recap:

1. The SSH URL to your GitHub repository
2. Code to build your site under **module_1**
3. README, requirements.txt under **module_1**
4. Screenshots of each tab of your running site saved as a pdf document under **module_1**

Please let us know if you have any questions via Teams or email!