Project Iteration 01 Website Portfolio

**Points:**  50

**Due Date:**  See Canvas.

Work will be accepted up to 24 hours after the due date with a 10% penalty. Meaning if you turn it in at 12:01 am of the next day you will be deducted 10% of the total points from your score. If the assignment is more than 24 hours late, it will be a 0.

Purpose:

* Create Computational Artifacts:Design and build a website that showcase your creativity, technical expertise, and problem-solving abilities. These artifacts will reflect your unique vision and mastery of key concepts.
* Use Abstractions and Models: Learn to effectively use abstractions and models such as html, css and bootstrap to break down complex computational problems into manageable pieces, enabling you to develop innovative and practical solutions.
* Communicate Processes and Results: Share your processes, ideas, and results clearly and effectively, on your website. Develop the skills to make technical concepts accessible and impactful for any audience.

Effort: Collaborative and Individual following [CS Academic Integrity and AI Policy - Harding](https://docs.google.com/document/d/1SY4-RMJ2B9GkEbTzmpRVSfKKsgQnYWYF/edit)

* You are encouraged to collaborate to discuss concepts but individually write your own code and answer the questions in your own words . When you ask questions and explain to others you get a deeper understanding. You can use AI tools but remember
  + Acceptable: Using ChatGPT to explain HTML
  + Unacceptable: Asking ChatGPT to generate your explanation

**Deliverables:** Upload this document as a pdf or word document with your answers in yellow boxes

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# Overview

For this project, you will create the first iteration of your personal website portfolio using Glitch. Your portfolio will serve as an online resume and showcase your skills and interests. This iteration focuses on building a well-structured website containing a home page and Internet page showcasing your learnings.

## Part 1: Project Web Site Requirements

* Navigation Menu:
  + Implement a navigation menu for the home page and the Internet page to facilitate user navigation.
* Home Page Content:
  + Resume Summary:
    - Provide a brief summary about yourself, including your background, career goals, or key accomplishments.
  + School and Major:
    - Clearly state your school and major.
    - Include a hyperlink on your major that directs to a webpage with more information about that field or your specific major program.
  + Skills List:
    - Create a list of your skills organized into at least two categories (for example: “Technical Skills,” “Soft Skills,” “Languages,” etc.).
  + Things I Enjoy Section:
    - Include a section that highlights your personal interests or hobbies.
    - Provide at least two external links related to these interests (e.g., links to articles, videos, etc)
    - Visual Gallery Include 2 to 3 photos. Ensure the image is appropriately licensed or is your own work. The photo can be
      1. ones you have taken
      2. images you have created
      3. Royalty Free such as
         1. [Technology, Digital, Programming. Royalty-Free Vector Graphic - Pixabay](https://pixabay.com/vectors/technology-digital-programming-8490011/)
* Internet Page Content Overview: A brief summary of module 2 on the Internet, Encoding and
  + Overview:
    - A brief summary of module 2 on the Internet, Encoding and Encryption
* What is the Internet and how does data travel?
  + Explain key concepts like networks, protocols, and physical connections (wires, fiber optics, Wi-Fi).
  + Describe packet switching, routing, and reliability.
  + Use a A diagram or flowchart showing data packets traveling through different network paths.
  + Link to an external resource that explains the Internet in more detail (for example, a reputable article or educational video).
* What is Encoding?
  + Explain Binary, Decimal and ASCII encoding
  + Provide visuals. For example, include a screenshot of your spreadsheet.
* What is Encryption?
  + Define encryption and its purpose in protecting data.
  + Symmetric Encryption: Briefly explain the concept and its use cases.
  + Asymmetric Encryption: Compare with symmetric encryption and discuss public/private keys.
  + Image: A side-by-side diagram or table comparing symmetric and asymmetric methods.
  + Link to an online encryption tool (e.g., an RSA encryption demo) or additional reading on encryption techniques.

4. Secure Communication Practices

* HTTPS and Security:
  + Explain how HTTPS uses encryption (SSL/TLS) to secure data transmission.
  + Image Suggestion: An icon or diagram representing a secure connection (like a lock symbol).
* Best Practices:
  + Summarize key points for maintaining online security, such as using strong passwords and keeping software updated.

## Part 2: Specification

* Build Website using glitch. Getting Started with glitch use this template <https://glitch.com/edit/#!/cs1030-template?path=index.html%3A40%3A76>
* Bootstrap Framework: Use Bootstrap CSS for styling your page. This includes leveraging the grid system, navigation components, and other Bootstrap utilities to create a responsive design. Here are some resources to find different components you might want to add to your website
  + - [Bootstrap v5.3](https://getbootstrap.com/docs/5.3/components/navbar/) - navbar example but to the left are other examples.
    - [Bootstrap 5 Tutorial](https://www.w3schools.com/bootstrap5/)
  + Examples of things to explore. **Remember to keep it simple. Do not try to do too much.**
    - Carousel (Slideshow) for images
    - Cards
    - Colors
    - Navigation Menu
    - Jumbotron
    - Darkmode
* Accessibility: Ensure your website follows accessibility best practices (autistic spectrum, screen readers, low vision, physical or motor disabilities, deaf or hard of hearing, and dyslexia).
  + - "How does your website accommodate users with visual impairments?"
    - "What steps did you take to ensure keyboard navigability?"
    - "How does Bootstrap contribute to accessibility?"
  + You will need to add at least 5 accessibility features and provide
* **A Brief Explanation:** What feature did you implement?
* **Justification:** Why is this feature important for accessibility?
* **User Impact:** How does this feature benefit users with specific disabilities?
* **Implementation Details:** How did you apply this feature in your website?

Here is an example you can use

| **Accessibility Feature** | **What It Does** | **Who It Helps** | **How You Implemented It** |
| --- | --- | --- | --- |
| Alt Text for Images | Provides a text description of images. | Helps visually impaired users who rely on screen readers. | Added alt="description" to all images in HTML. |

* HTML Comments:
  + Your HTML code must include comments that explain major sections and functionalities of your code. Comments should help anyone reading your code understand your structure and logic.
* Set up Version control A basic Git workflow (e.g., git add, git commit, git push).
  + [Version and BackUp your Glitch Website using git and github](https://fewd.samizdat.co/2021/learn/howto/glitch-and-github/)

Part 3: Learnings and Reflection

Technical Learnings

| 3.1 Explain what git commands you used to version and back up your website files on github.  Include a screenshot of your commands  Include a screenshot of your github repository containing your glitch website code. |
| --- |
| 3.2 Why is version control important in collaborative and individual work? |
| 3.3 Paste a small example of a feature you added using bootstrap and explain how the html and css classes being used. |
| 3.4 Explain what you did to have images to display. |
| 3.5 Put the url to your website. |

3.6 Fill in the table with 5 accessibility features you implemented

| **1. Accessibility Feature EXAMPLE DONE FOR YOU**  Alt Text for Images  **What It Does**  Provides a text description of images.  **Who It Helps**  Helps visually impaired users who rely on screen readers.  **How You Implemented It**  Added alt="description" to all images in HTML.  **Screenshot if it is something displayed such as color or size** |
| --- |
| **2. Accessibility Feature**  **What It Does**  **Who It Helps**  **How You Implemented It**  **Screenshot if it is something displayed such as color or size** |
| 3**. Accessibility Feature**  **What It Does**  **Who It Helps**  **How You Implemented It**  **Screenshot if it is something displayed such as color or size** |
| 4**. Accessibility Feature**  **What It Does**  **Who It Helps**  **How You Implemented It**  **Screenshot if it is something displayed such as color or size** |
| **5. Accessibility Feature**  **What It Does**  **Who It Helps**  **How You Implemented It**  **Screenshot if it is something displayed such as color or size** |

#### **Internet and Web Concepts**

| 3.7 What role would DNS play in users accessing your site |
| --- |
| 3.8 What happens when someone enters your website's URL in a browser? Describe the process from a networking perspective. |
| 3.9 Is your glitch website secure? Explain |

**Reflection**

| 3.10 What was the most challenging aspect of creating your website? How did you overcome it? |
| --- |
| 3.11 Explain two things you didn’t understand well about HTML, CSS and Bootsrap in module but understand better now. |
| 3.12 If you had more time, what additional features would you add to your website? |

## Rubric

Evaluation Criteria:

| Content (20 pts)  Meets all project requirements and specifications, including navigation, home page, and Internet page content. | 20 to >19 pts  Exemplary A+  Website fully meets requirements and specifications with excellent content organization, clarity, and completeness. | 19 to >15 pts  Proficient A-B  Most requirements and specifications are met with minor issues in content or organization. | 15 to >11 pts  Developing C-D  Missing many requirements and specifications. | 11 to >0 pts  Insufficient F  Website is incomplete. |
| --- | --- | --- | --- | --- |
| Accessibility Features (10 pts) | 10 to >9 pts  Exemplary A+  5 Accessibility features are clearly implemented, explained, and follow best practices. | 9 to >7 pts  Proficient A-B  Includes 5 accessibility features but with minor gaps or insufficient justification. | 7 to >5 pts  Developing C-D  Missing accessibility features and contains insufficient justification. | 5 to >0 pts  Insufficient F  Accessibility features incomplete |
| Learning and Reflection (20pts) | 20 to >19 pts  Exemplary A+  Provides in-depth reflections with strong connections to learning objectives. | 19 to >15 pts  Proficient A-B  Reflection is thoughtful but may lack depth in some areas. | 15 to >11 pts  Developing C-D  Reflection is present but lacks depth or connections to learning. | 11 to >0 pts  Insufficient F  Minimal or unclear reflection with little connection to learning. |