Final Project Requirements & Guide

Public Domain Digital Exhibit Website

Project Overview

The Final Project is the culminating assessment for this course. You will design, develop, test, and publish a fully functional front-end website that demonstrates your understanding of HTML5, CSS, responsive design, accessibility, GitHub deployment, and introductory JavaScript. The project emphasizes thoughtful design, technical implementation, user feedback, accessibility, and iterative improvement.

Learning Objectives

By completing this project, you will:

- Build accessible semantic HTML5 documents
- Apply responsive CSS layout techniques
- Organize a multi-page or single-page website structure
- Implement a lightweight JavaScript enhancement
- Apply accessibility and progressive enhancement principles
- Manage project files and deployment workflows
- Practice iterative development and user-centered refinement
- Publish a production-ready website to GitHub Pages

Project Topic

Recommended Topic

NASA Mars Rover Program

Create an informational website about NASA's Mars Rover Program.
Your website should feature at least two of the following rovers:

- Spirit
- Opportunity
- Curiosity
- Perseverance
- Sojourner (optional)

Each rover section should include:

- Mission overview
- Launch and landing details
- Major discoveries
- Technical/design features
- Supporting imagery

Alternative Topics

You may choose another instructor-approved public-domain topic such as:

- National Parks Explorer
- Smithsonian Digital Exhibit
- Library of Congress Historical Collection

- Space Exploration Missions
- Ocean Exploration
- Historic Transportation Systems
- Wildlife or Ecology Exhibit

All media must be public domain or appropriately licensed.

Website Requirements

Site Structure

Choose one:

Option A – Multi-Page Website

- Minimum of three HTML pages

Option B – Single Page Application (SPA)

- One page with clearly organized sections and navigation anchors

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Required Components

Your project must include:

- Semantic HTML5 structure
- External CSS stylesheet(s)
- Optimized web images
- Responsive layout
- Accessible navigation
- Meaningful heading hierarchy
- Consistent branding/design system
- Accessible color contrast
- Keyboard-navigable interface
- At least one JavaScript enhancement
- Proper file organization
- GitHub Pages deployment

Technical Requirements

HTML

- Semantic HTML5 elements
- Valid markup
- Logical heading structure
- Accessible navigation and forms (where applicable)

CSS

- External stylesheets only
- Responsive layout
- Consistent typography and color system
- Appropriate spacing and layout practices

JavaScript

Implement at least one enhancement such as:

- FAQ Accordion
- Dark Mode Toggle
- Navigation Menu Toggle
- Show/Hide Content
- Dismissible Banner
- Interactive Image Reveal
- Local Weather Display
- Time Display

JavaScript must:

- Use an external .js file
- Avoid inline event handlers
- Support keyboard accessibility
- Enhance the user experience without replacing core functionality

Accessibility Requirements

Your project must demonstrate:

- Descriptive alt text
- Semantic page structure
- Keyboard navigation
- Visible focus indicators
- Sufficient color contrast
- Meaningful link text
- Appropriate ARIA attributes when needed

Media & Attribution Requirements

Acceptable image sources include:

- NASA Image Library
- Smithsonian Open Access
- National Park Service Archives
- Library of Congress Public Collections

All images must:

- Be optimized for web delivery
- Include descriptive alt text
- Avoid distortion or stretching

NASA Disclaimer (if applicable)

If you use NASA branding, include the following statement in your footer:

This website was created as a student project for educational purposes. NASA is not affiliated with or endorsing this work.

Required Metadata & Links

Include the following meta tags:

- charset
- viewport
- description

Your website must also contain:

- At least one external informational link
- At least one email link in the footer

User Feedback Requirement

You must obtain feedback from at least **three users**.

Gather feedback regarding:

- Usability
- Readability
- Accessibility
- Navigation
- Visual design

Suggested questions:

- Was the site easy to navigate?
- Was the content readable and understandable?
- Did anything feel confusing or inaccessible?
- Did the visual design feel consistent?
- Did the site work well on mobile devices?

You are expected to revise your project based on the feedback received.

Reflection Questions

Final Project Reflection - Separate Blackboard Assignment

After completing your website and user feedback process, submit a separate Final Project Reflection in Blackboard addressing the following questions:

1. What design goals guided your project?
2. What accessibility considerations did you implement?
3. What JavaScript enhancement did you add and why?
4. What feedback did you receive from users?
5. What changes did you make based on feedback?
6. Was there any feedback you chose not to implement? Why?
7. How did you use AI tools during the project?
8. What technical challenges did you encounter?
9. What would you improve if you continued the project?

AI Usage Policy

AI tools may be used for:

- Brainstorming
- Research assistance

- Debugging help

- Content outlining
- Syntax assistance

However:

- You remain responsible for all submitted work.
- You must understand and review all code and content.
- Excessive copy-and-paste generation without understanding is prohibited.
- AI usage must be disclosed in your reflection document

Submission Checklist

Submit the following:

- ☐ GitHub Repository URL
- ☐ GitHub Pages Website URL
- ☐ HTML Validation Results or Screenshots
- ☐ Accessibility Testing Results or Screenshots
- ☐ Evidence of User Feedback Collection

NOTE: *The* ***Final Project Reflection*** *is submitted separately in Blackboard.*

Recommended Testing Tools

- W3C Validator
- WAVE Accessibility Tool
- Google Lighthouse

Grading

Category	**Points**
Technical Implementation	**40 points**
Accessibility & Standards Compliance	**20 points**
Visual Design & Layout	**20 points**
Content Organization & Information Architecture	**10 points**
Usability, Testing & User Feedback	**10 points**
Total	**100 points**

Projects will be evaluated on technical quality, accessibility, usability, design consistency, organization, standards compliance, and evidence that user feedback was considered and incorporated into the final website.

Final Project Reflection - 25 points (graded separately)
The reflection will evaluate your design and development process, accessibility decisions, JavaScript implementation, user feedback and revisions, use of AI tools, technical challenges, and opportunities for continued improvement.