Course: Web Development Fundamentals **Assignment Type:** Practical / Applied Tasks **Due Date:** March 22, 2026 **Total Points:** 100

Project: Build a Responsive Portfolio Website

Create a professional portfolio website that showcases your work and demonstrates your web development skills.

Task 1: HTML Structure (25 points)

Create a well-structured HTML5 website with the following pages:

Required Pages:

1. **Home Page (index.html)** - 8 points
   - Hero section with your name and tagline
   - Brief introduction
   - Navigation menu
   - Footer with contact information
2. **About Page (about.html)** - 6 points
   - Professional bio (150-200 words)
   - Skills section with list of technical skills
   - Education and/or experience timeline
3. **Projects Page (projects.html)** - 6 points
   - At least 3 project cards with:
     - Project title
     - Description
     - Technologies used
     - Link to demo/repository
4. **Contact Page (contact.html)** - 5 points
   - Contact form with fields:
     - Name (required)
     - Email (required)
     - Subject
     - Message (textarea)
     - Submit button

HTML Requirements:

- Use semantic HTML5 tags (header, nav, main, section, article, footer)
- Proper document structure with DOCTYPE, head, and body
- Include meta tags for character set and viewport
- All forms must have proper labels and input types

- All images must have alt attributes

Task 2: CSS Styling (30 points)

Create an external stylesheet (styles.css) with the following:

Layout and Design (15 points)

- Consistent color scheme (define at least 3 colors)
- Professional typography (use Google Fonts)
- Proper spacing and margins
- Box model understanding demonstrated
- Flexbox or Grid layout for page sections

Responsive Design (15 points)

- Website must be fully responsive
- Test on at least 3 breakpoints:
  - Mobile (< 768px)
  - Tablet (768px - 1024px)
  - Desktop (> 1024px)
- Use media queries appropriately
- Navigation menu should collapse on mobile (hamburger menu optional but recommended)
- Images should scale appropriately
- Text should remain readable at all sizes

Task 3: Interactive Features with JavaScript (20 points)

Add JavaScript functionality (script.js):

Required Features:

1. **Form Validation (8 points)**
   - Validate that name and email fields are not empty
   - Validate email format using regex
   - Display error messages for invalid inputs
   - Show success message on valid submission
   - Prevent form submission if validation fails
2. **Dynamic Content (7 points)**
   - Implement a "dark mode" toggle button
   - Theme preference should persist (use localStorage)
   - Smooth transitions between themes
3. **Interactivity (5 points)**

- Smooth scrolling for navigation links
- Add "scroll to top" button that appears when user scrolls down
- Optional: Image carousel or modal for project screenshots

Task 4: Accessibility and Best Practices (15 points)

Accessibility (10 points)

- Color contrast meets WCAG 2.1 AA standards
- Keyboard navigation works for all interactive elements
- ARIA labels where appropriate
- Focus indicators visible on all focusable elements
- Proper heading hierarchy (h1, h2, h3)

Best Practices (5 points)

- Code is well-organized and commented
- CSS follows BEM or similar naming convention
- No inline styles or JavaScript
- External files properly linked
- Cross-browser compatibility (Chrome, Firefox, Safari)

Task 5: Deployment and Documentation (10 points)

Deployment (5 points)

Deploy your website using ONE of the following: - GitHub Pages - Netlify - Vercel - Any other free hosting service

Provide the live URL in your submission.

Documentation (5 points)

Create a README.md file including: - Project description - Technologies used - Features implemented - How to run locally - Link to live site - Screenshots (at least 2) - Any challenges faced and how you solved them

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Bonus Tasks (Optional - Up to +15 points)

Choose ONE or more: - **Animations (+5 points):** Add CSS animations or transitions - **Advanced JavaScript (+5 points):** Implement project filtering by technology - **Performance (+5 points):** Optimize images, achieve >90 Lighthouse score - **Additional Page (+5 points):** Add a blog page with at least 2 articles

Submission Requirements

File Structure:

```
portfolio/
    index.html
    about.html
    projects.html
    contact.html
    css/
        styles.css
    js/
        script.js
    images/
        (all image files)
    README.md
    screenshots/
        (at least 2 screenshots)
```

Submission:

1. Compress your project folder into a ZIP file: `StudentID_A5_Portfolio.zip`
2. Include a separate text file with:
   - Your live website URL
   - GitHub repository link (if applicable)
3. Submit via the course portal before the deadline

Grading Rubric

Task	Points	Key Criteria
HTML Structure	25	Semantic markup, proper structure, all required pages
CSS Styling	30	Professional design, responsive layout, consistency
JavaScript	20	Form validation, dark mode, smooth interactions
Accessibility	15	WCAG compliance, keyboard navigation, best practices
Deployment & Docs	10	Live site accessible, complete documentation
Total	**100**	

Evaluation Criteria

Your website will be tested on: - Multiple browsers (Chrome, Firefox, Safari) - Multiple devices (desktop, tablet, mobile) - Accessibility tools (WAVE, Lighthouse) - Code quality (W3C validators)

Resources

- HTML Validator: https://validator.w3.org/
- CSS Validator: https://jigsaw.w3.org/css-validator/
- Color Contrast Checker: https://webaim.org/resources/contrastchecker/
- Google Fonts: https://fonts.google.com/
- Font Awesome Icons: https://fontawesome.com/

Note: Websites that are not responsive or accessible will receive significant point deductions. Test thoroughly before submission!