CSCE 5612 Embedded Hardware/Software Design

Spring 2026

Lab #1-1: How to Create and Update Your Project Website

Due: 1/14/2026 @ 11:59pm

Creating a website for your project allows you to document and share your progress in a professional and organized manner. It helps you develop skills in web development, version control, and online communication—valuable competencies for embedded systems engineers. The website serves as a central repository for your updates, designs, images, and videos, making it easy to showcase your work to instructors, peers, and even potential employers. Additionally, using tools like GitHub Pages introduces you to real-world practices in collaborative development and project documentation.

Step 1: Set Up a GitHub Account
1. Go to [GitHub](https://github.com/) and sign up for a free account.
2. Verify your email to activate your account.

Step 2: Create a New GitHub Repository
1. Log in to GitHub and click the **+** icon in the top-right corner, then select **New Repository**.
2. Name your repository something like `project-website`.
3. Check the box for **Add a README file** and click **Create Repository**.

Step 3: Enable GitHub Pages
1. Go to **Settings** (top menu) in your repository.
2. Scroll down to the **Pages** section.
3. Under **Source**, select **Deploy from a branch**.
4. Choose the **main** branch and the **root** directory, then click **Save**.
5. GitHub will provide a link to your website, typically `https://<your-username>.github.io/<repository-name>/`. It may take a few minutes to go live.

Step 4: Create Your Website's Home Page
1. Go to the **Code** tab of your repository.
2. Click **Add file** > **Create new file**.

3. Name the file `index.html`.
4. Paste the following basic template into the editor:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>My Project</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <h1>Welcome to My Project Website</h1>
    <p>This website documents my project progress.</p>
    <h2>Updates</h2>
    <ul id="updates">
        <li>Week 1: Initial setup completed!</li>
    </ul>
</body>
</html>
```

5. Scroll down and click **Commit new file**.

Step 5: Add Styles with CSS
1. Create another file called `style.css` in the repository.
2. Add the following styles:

```css
body {
    font-family: Arial, sans-serif;
    line-height: 1.6;
    margin: 0;
    padding: 0;
    background-color: #f4f4f9;
    color: #333;
}
h1 {
    background-color: #0078D7;
    color: white;
    padding: 10px;
    text-align: center;
}
ul {
    padding: 15px;
    list-style-type: square;
}
```

```
```

3. Commit the changes.
Step 6: Add Images to Your Website
1. Upload an image to your repository by clicking **Add file** > **Upload files**.
2. Reference the image in your `index.html` file:

``` HTML
<img src="path-to-your-image.jpg" alt="Project Diagram" width="300">
```

3. Replace `path-to-your-image.jpg` with the actual name of your image file.

Step 7: Add Videos to Your Website
Option 1: Upload a Video File
1. Upload the video file to your repository.
2. Add the following code to your `index.html` file:

``` HTML
<video controls width="600">
    <source src="path-to-your-video.mp4" type="video/mp4">
    Your browser does not support the video tag.
</video>
```

3. Replace `path-to-your-video.mp4` with the name of your video file.

Option 2: Embed a YouTube Video
1. Find the video on YouTube.
2. Click **Share** > **Embed**, then copy the embed code.
3. Paste the code into your `index.html` file. Example:

``` HTML
<iframe width="560" height="315" src="https://www.youtube.com/embed/VIDEO_ID"
frameborder="0" allow="autoplay; encrypted-media" allowfullscreen></iframe>
```

4. Replace `VIDEO_ID` with the actual video ID from the YouTube link.

Step 8: Update Your Website Regularly
1. Edit your `index.html` file directly on GitHub to add new updates under the **Updates** section:

``` HTML
<ul id="updates">
    <li>Week 2: Designed the initial layout.</li>
```

```
    <li>Week 3: Added image and video examples.</li>
</ul>
```

2. Commit your changes, and the updates will appear on your live website.

Step 9: Advanced Features (Optional)
Use a Template
- Download free HTML templates from sites like [HTML5 UP](https://html5up.net/) or [Bootstrap](https://getbootstrap.com/).
- Replace your `index.html` file with the template's files and customize them.

Add JavaScript
- Use JavaScript to add interactivity to your website, such as dynamic updates or animations.

Key Benefits
- Free Hosting:** GitHub Pages provides free and reliable hosting.
- Version Control:** Track all changes to your website easily.
- Professional Presentation:** A live website adds professionalism to your project.

Deliverables:

- Submit the link to your website on Canvas!