



CST-120 Milestone Project Guide



Introduction

In this course, you will work individually to design and build a multi-page website using HTML, CSS, and JavaScript technologies and leveraging the jQuery and Bootstrap libraries. The website will support the content that represents your own personal home page. The following are some ideas to consider when building the site:

- "About Me" – several paragraphs about you, your history, interests, plans, experiences, etc.
- "Contact Me" – contact information such as email address, mobile phone number, Twitter handle, links to other social media pages, etc.
- "List of Hobbies" – a list of hobbies that offers a description of the hobby and some of the things you have completed in regard to that hobby.
- "List of Important Events" – list of skills, list of facts, etc. that display well in a table format, with at least three column headings. For example: Date, Description, Relative Importance.
- "Things to Share" (videos and audio)
- "Photo Collection" (grid/table of images)
- "Notable Places Map" (absolute element positioned items over an image)
- "Special Events or Announcements" (multiple sections of a single scrollable page)
- "Christian Worldview" – church activities, beliefs, outreach projects, etc.

You will have the creative freedom to choose the content, style, and colors for your site, but the following high-level requirements must be met for the assignments and your website must consist of at least 6 pages:

- The website must be developed using the Microsoft Visual Studio Code development environment (VS Code). All pages must be coded by hand using this development environment. No graphical website design tools, such as those from Adobe or other online services, can be used to develop your website pages. Detection of non-approved development tools in this course will result in a grade of 0. The Microsoft Visual Studio

Code development environment will be installed and validated in the first activity of this course.

- The website must represent your own personal home page. You have the creative freedom to decide what content you will include for your website. You will be assessed during the course on your ability to code a website and not assessed on the actual user interface design of the website.
- The website must be designed and developed to include the following technical elements:
 - ✓ ○ HTML tags to support basic page structure
 - ✓ ○ HTML tags to support a variety of text formatting, fonts, and colors
 - ✓ ○ HTML image tag
 - ✓ ○ HTML list tag
 - ✓ ○ HTML table tag
 - ✓ ○ HTML anchor tags to support multi-page navigation
 - ✓ ○ HTML media tags to support audio and/or video playback
 - ✓ ○ CSS tags to support a variety of text fonts, colors, borders, and page backgrounds
 - ✓ ○ CSS tags to support a transition and animation
 - ✓ ○ JavaScript to support event handling
 - ✓ ○ jQuery to support hiding and showing content
 - ✓ ○ Bootstrap to support a menu system or navigation bar and other components
 - ✓ ○ Bootstrap HTML form tags to support user data entry
 - ✓ ○ Bootstrap to support a responsive design
- The website does not need to be published to a website hosting company, such as GoDaddy.
- All milestone assignments require that your website first be designed by defining a user interface (UI) sitemap for the entire website and user interface (UI) wireframes designs for each page of the website.
 - The UI sitemap and UI wireframes can be designed using a variety of drawing tools, including, but not limited to, Microsoft Word, [Draw.io](#) (requires a Google Account), or [Marvel](#) (free for one project).
 - For UI sitemap examples, go to [Google Images](#) and search for *UI Sitemaps*.
 - For UI wireframe examples, go to [Google Images](#) and search for *UI Wireframes*.
- All milestone assignments require that all design documents, code, and a README.txt file with a link to a screencast video demonstration be submitted to the digital classroom. All code must be cleanly formatted and adequately commented. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the code works. The screencast video should be 4–5 minutes long. To create a screencast video, you can create a free [Loom](#) account and simply provide a link to the Loom screencast video with the assignment. **DO NOT** submit the actual video file to the digital classroom.

- A YouTube video for how to compress your assignment deliverables into a Zip file on Windows can be found [here](#). For the Mac you use the following steps:
 1. Right-click your mouse on your desktop and select *New Folder* from the menu.
 2. Copy all the files for the assignment to the new folder.
 3. Right-click the mouse on the new folder and select *Compress* from the menu.
 4. A zip file with the name of your new folder will be created on your desktop.

Project Milestones

The website will be designed and built using an iterative approach and delivered using the following milestone assignments.

Milestone 1 – Sitemap and Wireframe Designs:

- Initial website design consisting of a UI sitemap and UI wireframes designs. The design should meet the minimum page count requirements and align with the pages as suggested in the overview section of this document.
- Initial website demonstrating 1-page (e.g., the "About Me" page) that meets the following technical elements:
 - HTML tags to support basic page structure
 - HTML tags to support a variety of text formatting, fonts, and colors
 - HTML image tag (that includes "float" and "height" properties to control text wrapping)
 - HTML list tag
 - All code must be formatted with adequate comments
- Zip up the UI sitemap and UI wireframes design documents, all the code, and a README text file with a link to a screencast video demonstration into a file named *cst-120-assignment.zip* and submit to the digital classroom. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the design and code work. The screencast video should be 4–5 minutes long.

Milestone 2 – Tables and Multi-Page Sites:

- Updated website design from a UI sitemap and UI wireframes page designs.
- Updated website pages demonstrating, at minimum, 2 pages (e.g., the "Hobbies or Events" page) that meet the following technical elements:
 - HTML table tag
 - HTML anchor tags to support multi-page navigation
 - HTML media tags to support audio and/or video playback
 - All code must be formatted with adequate comments

- Zip up the UI sitemap and UI wireframes design documents, all the code, and a README text file with a link to a screencast video demonstration into a file named *cst-120-assignment.zip* and submit to the digital classroom. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the design and code work. The screencast video should be 4–5 minutes long.

Milestone 3 – CSS Styling:

- Updated website design from a UI sitemap and UI wireframes page designs.
- Updated all website pages demonstrating the following technical elements:
 - CSS tags to support a variety of text fonts, colors, border, and page background
 - CSS tags to support a transition and animation
 - CSS must be able to be reused across pages
 - All code must be formatted with adequate comments
- Zip up the UI sitemap and UI wireframes design documents, all the code, and a README text file with a link to a screencast video demonstration into a file named *cst-120-assignment.zip* and submit to the digital classroom. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the design and code work. The screencast video should be 4–5 minutes long.

Milestone 4 – Cleanup and Enhancements:

- Updated website design from a UI sitemap and UI wireframes page designs.
- Update, refactor, and clean up website code as necessary.
- Additional enhancements need to include:
 - The use of CSS Flexbox in page (e.g., a "Photos or Photo Collection" page), which should demonstrate proper row wrapping and control of margins
 - The addition of at least one custom font from fonts.google.com
 - Other enhancements can be made to the site as desired
- All code must be formatted with adequate comments.
- Zip up the UI sitemap and UI wireframes design documents, all the code, and a README text file with a link to a screencast video demonstration into a file named *cst-120-assignment.zip* and submit to the digital classroom. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the design and code work. The screencast video should be 4–5 minutes long.

Milestone 5 – JavaScript Events:

- Updated website design from a UI sitemap and UI wireframes page designs.
- Updated website pages demonstrating the following technical elements:
 - JavaScript to support at least 2 different event handlers, using 2 different events, on 2 different pages
 - JavaScript must be able to be reused across pages and implement as JavaScript functions
 - All code must be formatted with adequate comments
- Zip up the UI sitemap and UI wireframes design documents, all the code, and a README text file with a link to a screencast video demonstration into a file named *cst-120-assignment.zip* and submit to the digital classroom. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the design and code work. The screencast video should be 4–5 minutes long.

Milestone 6 – jQuery and Bootstrap Libraries:

- Updated website design from a UI sitemap and UI wireframes page designs.
- Updated website pages demonstrating the following technical elements:
 - jQuery to support hiding and showing content
 - Bootstrap to support a menu system or navigation bar and at least two other UI components from the Bootstrap library
 - Bootstrap to support a responsive design (this can be tested using the developer tools in your browser)
 - All code must be formatted with adequate comments
- Zip up the UI sitemap and UI wireframes design documents, all the code, and a README text file with a link to a screencast video demonstration into a file named *cst-120-assignment.zip* and submit to the digital classroom. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the design and code work. The screencast video should be 4–5 minutes long.

Milestone 7 – Final Website:

- Final website from a UI sitemap and UI wireframes page designs.
- Update, refactor, and clean up website code as necessary.
- Updated website pages demonstrating the following technical elements:
 - Bootstrap HTML form tags to support user data entry.
 - Bootstrap HTML form processing from a server-side script:
 - For testing, you can post your form with a form *method* of *POST* and a form *action* of *https://postman-echo.com/post*. You should specify a *name* attribute in all form elements. The response will be a JSON format that will contain all of the form elements posted.

- All code must be formatted with adequate comments.
- Zip up the UI sitemap and UI wireframes design documents, all the code, and a README text file with a link to a screencast video demonstration into a file named *cst-120-assignment.zip* and submit to the digital classroom. The screencast video must include a functional demonstration of the site and a code walk-through explaining how the design and code work. The screencast video should be 4–5 minutes long.

Milestone 7 – Final Project Presentation:

- Develop a PowerPoint presentation that outlines the following:
 - ✓ ○ Functional introduction to the website developed.
 - ✓ ○ Goals and design decisions for the website developed.
 - ✓ ○ Challenges encountered during the development of the website.
 - ✓ ○ Pending bugs or issues remaining in the website.
 - ✓ ○ Short (2- to 3-minute) screencast video demonstration of the working website.
 - ✓ ○ Five things learned during the course that could be leveraged in future web application projects.
 - ~~○ Questions and answers (ground classroom presentation only).~~
- This virtual presentation will be delivered via a screencast video, 8–10 minutes long (two Loom videos may be required to meet this length).
- Zip up the PowerPoint presentation, and include a README text file with a link to a screencast video demonstration in a zip file named *cst-120-assignment.zip* and submit to the digital classroom.