Web Programming Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Activity 2.2 – Photo Gallery

Points: \_\_\_\_\_\_\_\_\_\_ / 42

Flexbox helps you design your webpage so that it looks good on any screen size. In this activity, you'll use Flexbox to build a responsive photo gallery webpage.

1. First, read this [article](https://developer.mozilla.org/en-US/docs/Web/CSS/box-sizing) about the CSS box-sizing property. As you read, answer the following questions in your engineering notebook...

a. What is the difference between content-box and border-box?

b. Draw a picture that demonstrates the difference between these two.

2. Next, read this [article](https://developer.mozilla.org/en-US/docs/Learn/CSS/Building_blocks/Selectors/Combinators) about combinator selectors. As you read, answer the following questions in your engineering notebook...

a. How are combinator selectors formatted?

b. What is the purpose of combinator selectors?

c. When should you use a combinator selector?

3. Next, read this [article](https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_flexible_box_layout/Basic_concepts_of_flexbox) about the CSS flexible box layout. As you read, answer the following questions in your engineering notebook...

a. How does a flexbox arrange the content within itself?

b. How many axes does a flexbox have? What are they?

c. What are some properties that affect the content within a flexbox?

4. Next, read this [article](https://developer.mozilla.org/en-US/docs/Web/CSS/object-fit) about the object-fit property. As you read, answer the following question in your engineering notebook…

a. What is the difference between contain, cover, and fill?

4. And finally, read this [article](https://blog.logrocket.com/css-gap-vs-margin/#:~:text=The%20CSS%20gap%20property%20defines,space%20around%20an%20HTML%20element.) about the difference between the margin and gap properties. As you read, answer the following questions…

a. What is the difference between the margin and gap properties? Similarities?

b. When should you use the gap property over the margin property?

5. Download and extract the project folder from GitHub using the link provided in Google Classroom. Once extracted, rename the project folder using proper naming practices.

6. Next, open the file named *index.html*. Add a comment at the top of the document with the project name, your name, today’s date, and the title of the course on separate lines. Then open the file named *styles.css* (located in the styles folder) and add a comment at the top of the document with the same information. All content you add to the documents should be under these comments.

7. Login to [freeCodeCamp](https://www.freecodecamp.org/). Using the steps provided under the [*Learn CSS Flexbox by Building a Photo Gallery*](https://www.freecodecamp.org/learn/2022/responsive-web-design/#learn-css-flexbox-by-building-a-photo-gallery), complete the website. You should complete the work in Visual Studio Code and copy and paste the solution to each step into freeCodeCamp to check your answer. The following steps have different instructions for VS Code...

a. Step 3 – Instead of using href="styles.css" for the <link> element, use href="styles/styles.css".

b. Step 6 – Instead of using "https://cdn.freecodecamp.org/curriculum/css-photo-gallery/1.jpg" for the image’s src, use "images/1.jpg". Repeat this for the remaining 8 image’s by replacing the number.

8. When your website is complete, please do the following…

a. Compress the project folder and submit it to Google Classroom.

b. Print a copy of *index.html* and *styles.css*. Add these to your engineering notebook. Highlight and annotate your code.

c. Take a screenshot of the finished webpage (open it in a browser and use the *Snip and Sketch* tool). Print a copy of the screenshot and add it to your engineering notebook.

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| **Project Criteria** | |
| Criteria | Point(s) |
| <head> element contains all the necessary non-visible and visible elements to provide the necessary meta data for the website. | /4 |
| Website contains a <header> element with the correct class attribute. The <header> element contains a <h1> for the title of the webpage. | /3 |
| <div> element has the correct class attribute. The <div> element contains 9 <img> elements. | /10 |
| The 9 <img> elements display their corresponding pictures. The alt attribute is set for each <img> with an accurate description. | /9 |
| Website has the correct overall style and structure. | /5 |
| **Development Mechanics** | |
| Criteria | Point(s) |
| All elements are structured using best practices. | /2 |
| Project folder/director structure follows industry best practices. | /2 |
| All folders/directories and files use proper naming style (i.e., file-name). | /2 |
| All documents use whitespace and comments to help organize the code. | /2 |
| Project root folder/directory has an appropriate name. | /1 |
| All documents have a comment at the top that includes the program’s title, the student’s name, the date, and the course’s title. | /1 |

/ 42