



# Girls Who Code At Home

**Website Accessibility**

## Activity Overview



Welcome back to the second activity on designing for accessibility! In **part 1** you were introduced to assistive design and implemented new design ideas to modify a pencil to be more accessible. In **part 2**, we will explore assistive technology in the digital world. There are many types of assistive technology used by people with disabilities including screen readers, voice-to-text software, eye and motion tracking, and even tools that allow you to navigate with a breath of air! Unfortunately many websites do not accommodate these assistive technologies, making it difficult for people with disabilities to navigate the web. In this activity, you will first explore examples and non-examples of accessible websites and compare and contrast design elements incorporated on the websites that make it both easy and difficult to view. You will then use these ideas to make a website more accessible by adding alt-text to images that can then be read and described to people using screen readers.

## Learning Goals

By the end of this activity you will be able to...

- ❑ define the need and importance of accessibility for websites.
- ❑ generate a list of accommodations when planning and developing a website so that it is accessible for people who have disabilities or impairments.
- ❑ practice writing alt-text in HTML to make images more accessible for screen readers.

## Materials

- [Chrome Web Browser](#) or [Firefox Web Browser](#)
- Timer (phone, clock, microwave, etc)
- [Accessible Website Starter Code](#)
- [Website Accessibility Reference Guide](#)

## Prior Knowledge

- We recommend you complete [Part 1: Accessible Design](#) before beginning this activity. It is still possible to complete **Part 2**, we have included key concepts in the reference guide..

If you want to learn more about building a website with HTML and CSS, check out our 5-part series: [Activist Toolkit](#)

## Women in Tech Spotlight: Shannon Finnegan



Image Source: [School for Poetic Computation](#)

Shannon Finnegan is a multidisciplinary artist, which means they combine multiple forms of art, who raises awareness and educates people about society's perception of accessibility in public spaces. They gained a lot of attention based for their work on placing benches in inaccessible places such as parks, museums, and galleries. Their benches not only created a place for people to rest and take a break, but also educated others about the lack of accessibility in these spaces. Some of these benches can be seen with a simple message such as **"THIS EXHIBITION HAS ASKED ME TO STAND FOR TOO LONG. SIT IF YOU AGREE."**

In 2019, Shannon launched their next project on web accessibility called **"[Alt-Text as Poetry](#)"**. This project, in collaboration with [Bojana Coklyat](#), raised awareness of the lack of alternative (or alt) text for images on the web. People who rely on screen readers to view information on a website require alt text to provide a brief description of the images. Oftentimes the alt-text is either too short, too long, or non-existent. This project sought to collaborate with web developers to reframe alt-text as a type of poetry and to create descriptions thoughtfully and expressively.

## Reflect

Being a computer scientist is more than just being great at coding. Take some time to reflect on how Shannon and their work relates to the strengths that great computer scientists focus on building - bravery, resilience, creativity, and purpose.



**PURPOSE**

Shannon mentions that accessibility is often looked as a form of compliance, or something we need to have. How might you explain to others that accessibility should be thought of more as a creative process?

Share your responses with a family member or friend. Encourage others to read more about Shannon to join in the discussion!

## Step 1: Warm Up (5 mins)

In Part 1, we learned about accessible design and you had the chance to design a pencil to reach a broader audience. In this activity we will be thinking about websites and different features that make it easy for us to navigate and access information. Take **2 minutes** to reflect on our question of the day and write out your response in the space below.

**How does the design of a website affect the way you take in information?**

*Think about the last website you visited. What task were you trying to accomplish? Was it difficult or easy? Why?*

This open-ended question does not have a right or wrong answer. In fact we encourage you to share this question with friends and family and see how their responses differ from yours! At the end of this activity we will revisit the question to see how your answer might have changed.

### What is accessibility? (2-3 mins)



The term **accessibility** can be broken down as the *ability* for everyone to *access*. When thinking about accessibility, many people often only think about modifying technology to benefit people with disabilities. This is a large misconception because accessibility benefits all of its users regardless of ability. In this activity, we will explore and compare different accessible designs and breakdown the key components of accessibility that creates a better experience for everyone.

Over the course of history, people have designed environments - physical or digital - based on what they believe is a “normal”, average person. This idea of “normal” comes out of research from 19th century scientists, most of whom were able-bodied men who used themselves as a baseline to define “normal”. If you think this sounds like a problem, you would be right! Accessibility is often not considered or minimally implemented in a design. Companies often provide excuses such as it is “too hard” or “too expensive”. These misconceptions arise because the importance of accessibility is not widely discussed.

In this activity we will use the terms “people with disabilities”. It's important to keep in mind that this includes a spectrum of different physical and/or cognitive abilities, some that might be permanent and some that might temporary. It is important to remember that each individual has their own preferences on how they would like to be referred to, so be sure to ask! In general when using language around others we focus on ability and not limitations. Remember that a disability does not define a person. Check out the [ADA's website](#) for guidelines for writing about people with disabilities.

## Step 2: Explore a Non-Example (5-10 mins)

Part of creating an accessible website is having a great design that is easy to navigate. Before we dive into features that make a website accessible, take a look at a website that does not meet accessibility standards.

Choose **one** website from the list below and reflect on the questions below. If you have time, feel free to check out the other websites as well!

### Yale School of Art

<https://www.art.yale.edu/>



### Arngren.net

<http://www.arngren.net/>



### James Bond 007 Museum

<http://www.007museum.com/>



- **How does the website organize its content?** Is there an organized structure around how information and images are laid out on the website?
- **Is it easy to navigate or find the information on the website?** Is there a navigation bar or headers that make it easy to identify sections of content?
- **What do you find most distracting about the website?** Are the images, colors, or fonts distracting? Why?
- **What might be some limitations that people may face when attempting to navigate the web?** Consider the needs of different people and think about the challenges they may face when viewing this website.



Learn more about different types of disabilities on pg 2 in the Reference Guide.

## Step 3: Explore Accessible Websites (10-15 mins)

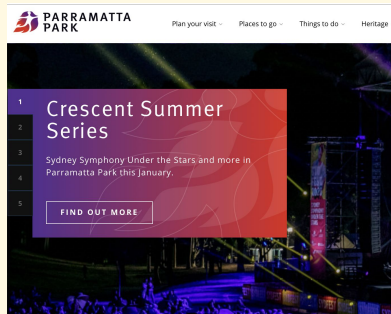
Not all websites are accessible to people with disabilities, but under the Americans with Disabilities Act, companies with at least 15 employees must have a website that includes accessible features. Each year the ADA releases a tool kit with best practices in incorporating accessible design on websites, check out the [2020 ADA toolkit](#) for more information.

You already examined websites that did not have an accessible design. Now let's look at websites that incorporate accessibility correctly. Choose any **two** websites from the list below and reflect on the questions below.

**Tip:** Use the [WAVE Extension](#) to view a website's accessibility report. This free browser extension scans a website for any elements, colors, and text size that is not accessible. Watch this [WAVE introduction video](#) to learn more how to use this tool.

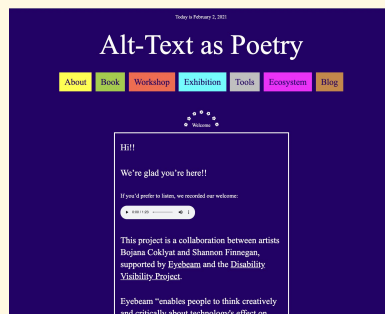
### Parramatta Park

<https://www.parrapark.com.au/>



### Alt Text as a Poetry

<https://alt-text-as-poetry.net/>



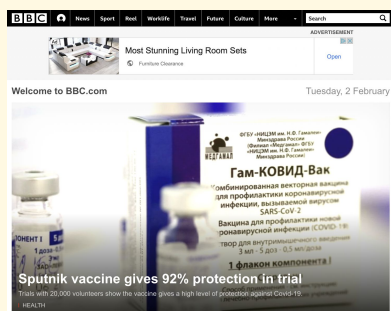
### British Dyslexia

<https://www.bdadyslexia.org.uk/>



### BBC

<https://www.bbc.com/>



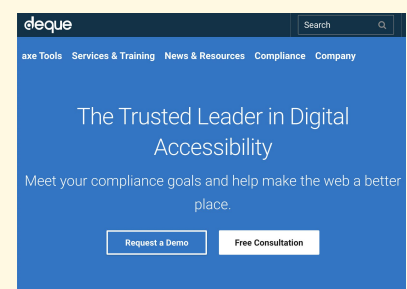
### New Republic

<https://newrepublic.com/>



### Deque

<https://www.deque.com/>



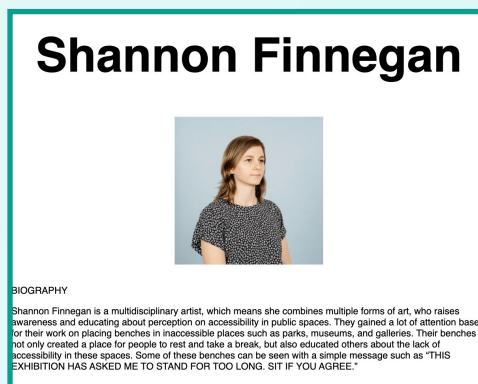


### Step 3: Explore accessible websites (cont.)

- **How did these websites differ from our non-examples?** What were some features that stood out to you?
- **Is it easy to navigate or find the information you are looking for on the website?** Name some specific features (color, text, navigation bar, etc) you noticed that made navigation easier.
- **Are there any design elements or styles you want to avoid using?**

## Step 4: Get started with Repl.it (10 - 15 mins)

For this activity we will be using the [Repl.it](https://repl.it) web editor. Repl.it is a free, collaborative, browser-based editor that supports multiple programming languages. This powerful tool can even allow you to code and talk with a group of friends all at the same time! In this activity you will be starting off with a website we created to highlight our woman in tech, Shannon Finnegan. Currently this website is not accessible, but you will have the opportunity to change that by adding your own poetic and expressive alt-text for the images. First let's start off with getting you set up on **Repl.it**!



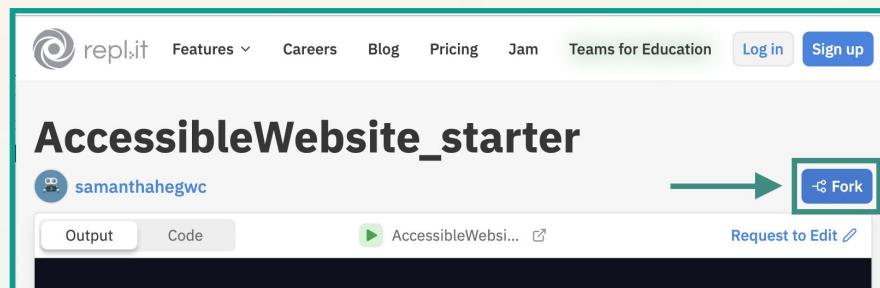
## Step 4: Get started with Repl.it (cont.)

### Create an account (5-7 mins)

- ❑ **Sign up or login to Repl.it.** In order to save your work you will need to create an account. Follow the instructions on the sign up form to create an account. If you are under 13 you'll need your parent's email address to sign up.
- ❑ **Follow the instructions to create an account.** You may choose to sign up with your Google, GitHub, or Facebook account for faster login.

### Fork the starter code (2-3 mins)

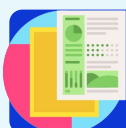
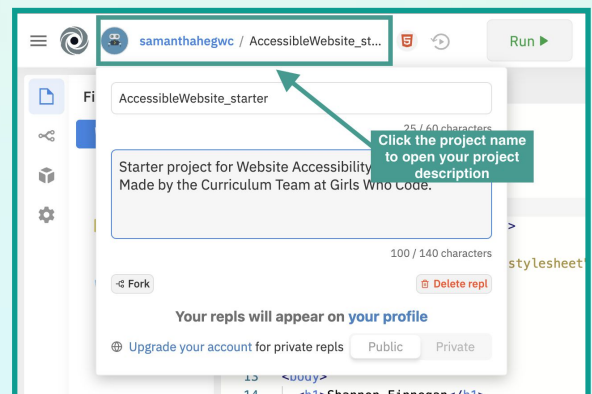
- ❑ **Open the [Accessible Website Starter Code](#).**
- ❑ **Create a copy of the starter by clicking the *Fork* button on the top-right of the window.** Creating a fork duplicates the entire project and adds it to your Repl account as a new project.



### Add a project description (1-2 mins)

Now that you have your own copy of the starter code, let's add a brief project description to our Repl.

- ❑ **Open the project description.** Click your project name at the top left of your screen. This should open a new window containing your project name and an area for a brief description.
- ❑ **Add a brief description.** You may choose to come back and add more to your description later. Something you might want to include in your description may include:
  - ❑ **Overview:** How is it supposed to work?
  - ❑ **Instructions:** Are there any specific instructions needed to run your project?
  - ❑ **Attributions:** Did you get help from others or additional resources? Make sure you shout out these people and resources!



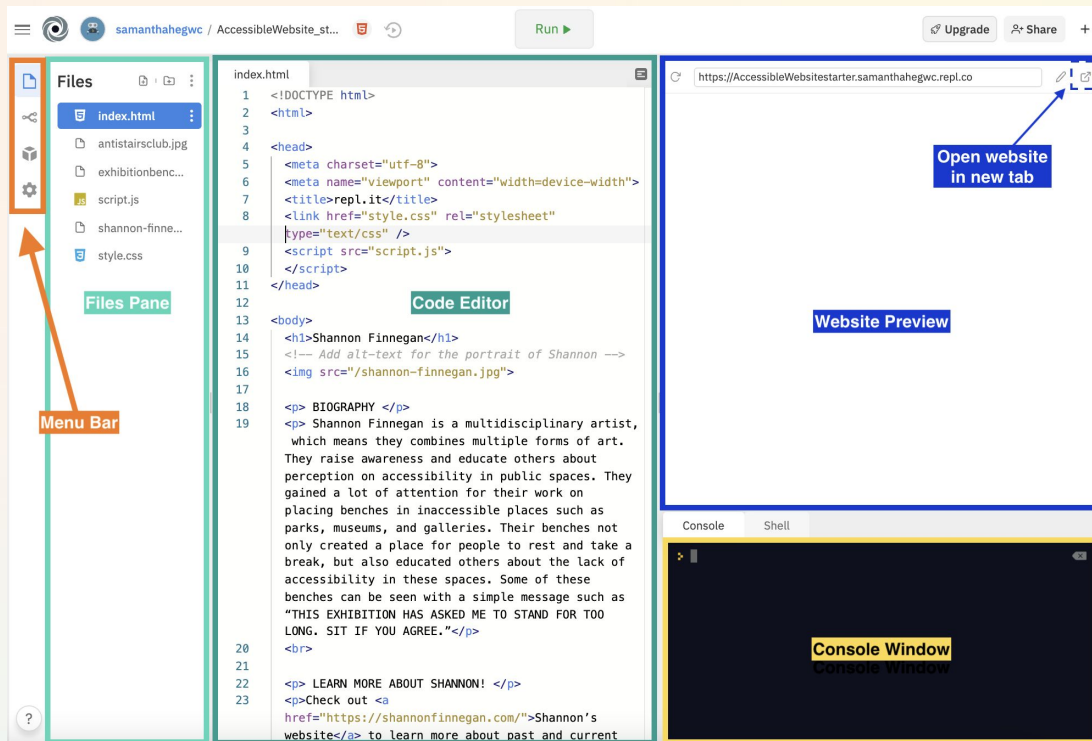
For more information on how to create a new Repl.it project, check the Reference Guide on pg 3.



## Step 4: Get started with Repl.it (cont.)

### Explore the Editor View (3-5 mins)

Let's take a look into the editor view for Repl.it. Now that we created a new project, we need to understand where to code, navigate between files and assets, and how to save and run your code!



- **Files Pane:** This window displays all of your project files. For this activity, we will only be working in one file, **index.html**, but you will also see other files.
- **Menu Bar:** This bar will allow you to change the view in the file pane. Some options include changing version control, adding packages, and updating settings. In the settings you can customize the layout, theme, font size, and other text settings.
- **Code Editor:** This is where you will write your code!
- **Run Button:** After making changes to your code, click the run button at the top of the editor. You should see your result in the output/console window on the right.
- **Website:** This window displays your website. If you want to view it as a full webpage, click the new tab button in the top right corner.
- **Console Window:** This displays any output in your code. All outputs will be visible, so if you click the run button multiple times, each result will be displayed here.

You may have noticed that there is no **save** button in Repl.it. As long as you have internet connection, all changes in your code will be saved automatically. Once you click the *Run* button your Repl is saved, so **make sure you always run your code before closing your editor!**

## Step 5: I Spy HTML (10-15 mins)

In this section, we will learn more about HTML by making observations about a webpage and its HTML. Programmers use HTML to build the skeleton or structure of a website.

Go to this [example website about cute baby animals](#). Spend a minute or two looking at the HTML and comparing the code editor pane to the website view.

In the next part of the activity, we are going to ask some basic questions and make simple observations to make sense of how HTML works. Read the question first, then try to formulate your own observation before reading the answer in the reference guide.

**HTML stands for  
Hyper Text Markup Language.**

We use HTML to add information to our content so we can organize a webpage.

**Question #1:** What do you notice about the colors in this chunk of code? Which words show up in the website panel? Which words don't show up? Why do you think this is?

18

```
<h1>Welcome to the Cuteness!</h1>
```

**Welcome to the Cuteness!**



Check your ideas on page 4 in the Reference Guide.

**Question #2:** What do you notice about the difference between the `<p>` tag and the `<img>` tag?

```

<p>Let's start with a piglet!</p>
```



Check your ideas on page 5 in the Reference Guide.

**Question #3:** What do you notice about these two tags?

17  
18  
19

```
<header>
  <h1>Welcome to the Cuteness!</h1>
</header>
```

**Welcome to the Cuteness!**


Question #3: What do you notice about these two tags?

17	<code>&lt;header&gt;</code>	
18	<code>&lt;h1&gt;Welcome to the Cuteness!&lt;/h1&gt;</code>	<b>Welcome to the Cuteness!</b>
19	<code>&lt;/header&gt;</code>	



Check your ideas on page 5 in the Reference Guide.

Question #4: What do you notice about spacing in these lines of code? Which tag makes a line break and which does not?

<pre>&lt;p&gt;Welcome to my cool new website with pictures of cute baby animals!  Check out pictures of the adorable creatures that made the top three below.&lt;/p&gt;  &lt;p&gt;Let's start with a &lt;strong&gt;piglet!&lt;/strong&gt;&lt;/p&gt;</pre>	<p>Welcome to my cool new website with pictures of cute baby animals! Check out pictures of the adorable creatures that made the top three below.</p> <p>Let's start with a <b>piglet!</b></p> 
---	---



Check your ideas on page 6 in the Reference Guide.

Question #5: What similarities do you notice in the `<img>` and `<a>` tags in these lines of code?

```

<p>Images are from <a href="https://www.boredpanda.com/">Bored Panda</a>.</p>
```



Check your ideas on page 6 in the Reference Guide.

**Question #6:** What do you notice about the gray text in this chunk of code? Does it show up in the right window? Why do you think this is?

```
30      <!--Add text and an image of second animal-->
31      <p>Next is a <strong>baby skunk</strong>! Stinkiness is no match for
32      cuteness.</p>
33      
```



Check your ideas on page 7 in the Reference Guide.

## Step 6: Meet the alt attribute (5-10 mins)

### What is alt text?

Let's take a look at all of the `img` tags in our [example website about cute baby animals](#).

```



```

You may have noted that there are **two** attributes included *inside* the tag. The `src` attribute provides a link to the image, but what about the `alt` attribute? If you look at the website we only see the image and not the words "Picture of a baby pig".

The `alt`, or alternative, attribute is used mainly for people who use screen readers. This may include people who are blind, have low vision, or have certain cognitive disabilities. This text is a short description of an image that is spoken by a screen reader.

### Alt-text as poetry (1 min)

Part of Shannon Finnegan's work is bringing awareness to the importance of using alt text on websites and changing people's views to consider alt text as a creative process, like poetry!

In order to write alt-text, Shannon breaks down three ideas to keep in mind:

1. **Attention to Language:** Consider what words we are using and what they mean.
2. **Word Economy:** Don't over-describe images. Keep your descriptions short and concise. In general your images should only contain one to two sentences.
3. **Experimental Spirit:** Be playful and adventurous when thinking about creating a description about your images. Try out different ways of describing the image.

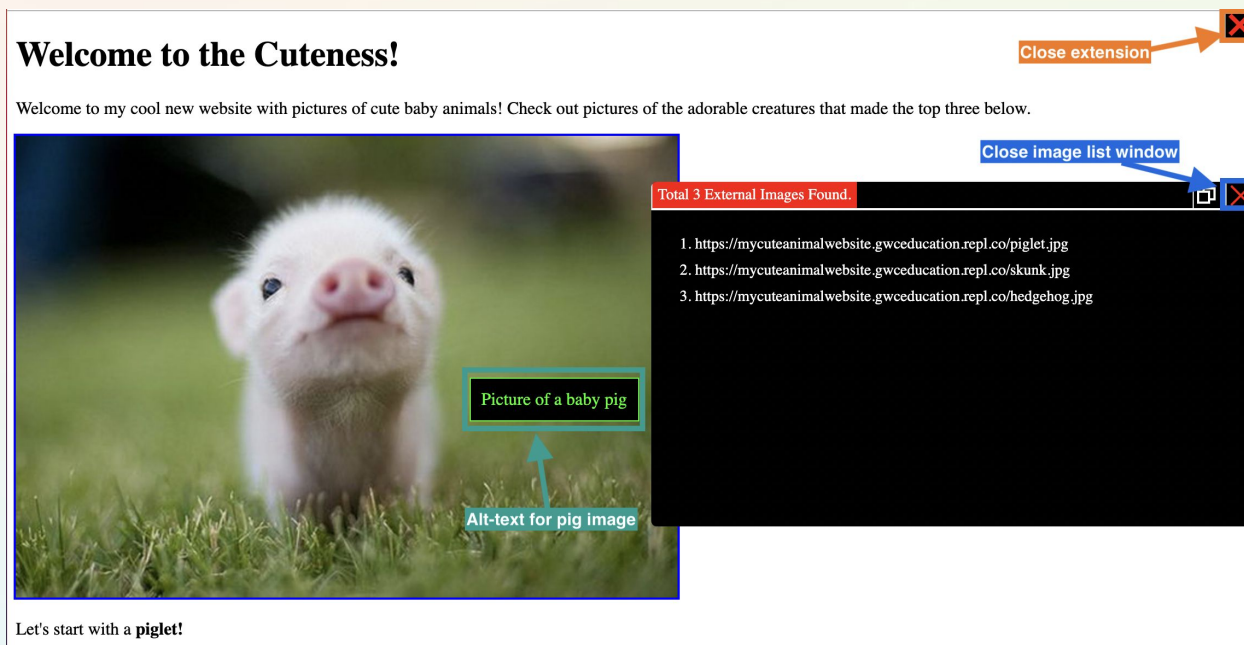
These tips were taken from the [alt-text-as-poetry website](#).

## Step Meet the alt attribute (cont.)

### Alt-text tester (3-5 mins)

Since alt-text isn't viewable to people who do not use a screen reader, we need an extra tool to test that our alt-text works. Luckily, there are many tools to help developers test alt text.

- ❑ **Download the Alt-Text Tester extension for [Chrome](#) or [Firefox](#).** This will allow you to view if there is any alt-text on a website.
- ❑ **Open the [cute baby animals website](#).** You may have to refresh the page and click on the extension icon to activate.
- ❑ **Hover your mouse over one of the images.** You should see the alt text appear. If there is no alt text available it would read "Alt Text Missing".



This extension also pops up a window with the links to all images included on the page. You can close this window by clicking the X icon on the top right of the window.

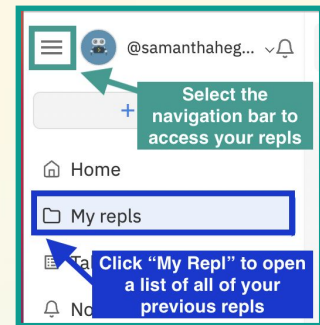
To close or exit the extension, click the X icon on the top right of your browser.

## Step 7: Add alt-text to our starter code (5-10 mins)

Now that we learned about HTML tags, attributes, and alt-text, it's time to redesign our starter website.

- ❑ Open back up **your** copy of the [Accessible Website starter code](#).

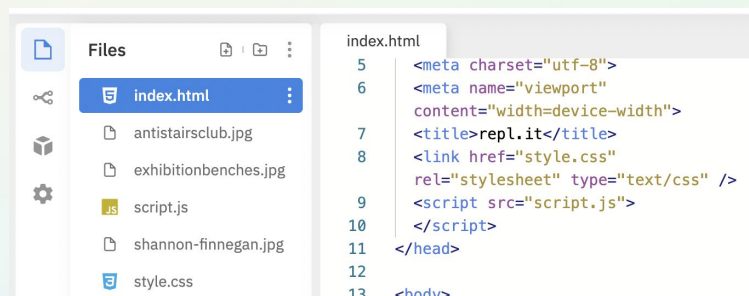
**Note:** You may need to click the navigation bar on the top left corner and select the **My Repl** option in the dropdown menu. Find your **Accessible Website** repl in the list.



**Note:** If you need a refresher on Shannon's tips, look back on page 12.

Let's walk through how to add alt-text for the first image on the website, her portrait.

- ❑ In the **Files** menu of your repl, select the **index.html** file. This will allow us to view all of the HTML for the website.



- ❑ Locate the first **img** tag on line 16. This image references the **shannon-finnegan.jpg** image which is a portrait of Shannon. You may have noticed this image file also appears under the Files menu of your repl.
- ❑ Add an **alt** attribute inside the **img** tag. When adding new attributes, you must use the name **alt** followed by an equal sign, **=**. Since we will be adding text, we also need to include our description inside quotation marks **" "**.

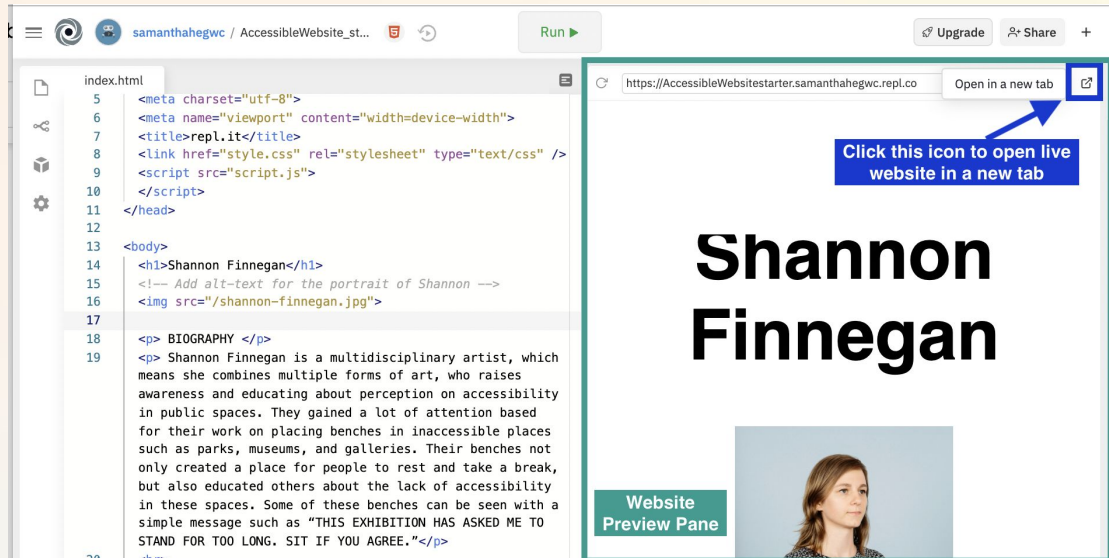
Your new attribute should follow a similar structure as shown below.


```
<img src = "image.jpg" alt = "Some descriptive text">
```

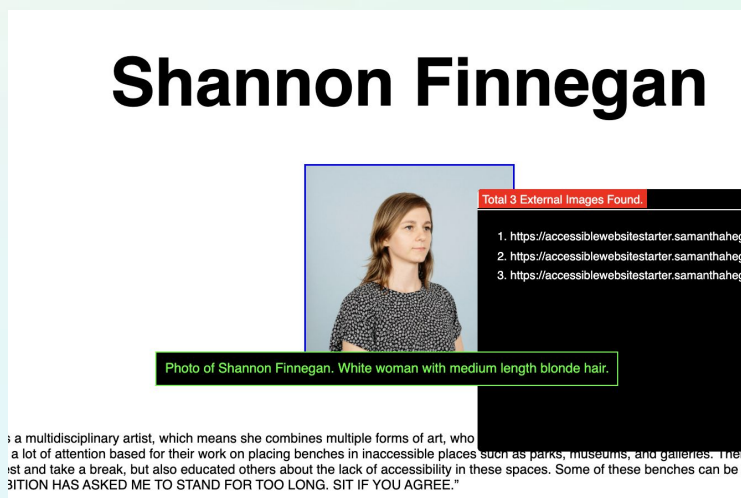


## Step 7: Add alt-text to our starter code (cont.)

- ❑ **Open the live view of your website.** In order to text the alt-text of our image with our Alt-text Tester we need to open the live view of our repl. Locate the “Open in a new tab” icon on the top-right corner of the website preview pane. When you click this icon, this should open a new tab with the live view of your website.



- ❑ **Run the Alt-Text Tester to see if you added alt-text to the first image successfully.** Click the Alt-Text Tester Icon  to run the extension. Hover your mouse over the first image of Shannon and check that your alt-text appears.



- ❑ **Add alt-text to the remaining images and run the Alt-Text Tester.** Navigate back to your code editor view of your repl to add the additional alt-text. Scroll down to the two images under “Shannon’s Work”. Don’t forget the three tips for writing alt-text. Keep it short and creative!
- ❑ **Open the live view of your website and run the Alt-Text Tester.** Locate the “Open in a new tab” icon on the top-right corner of the website preview pane in Repl.it. Click the Alt-Text Tester Icon to run the extension and hover your mouse over each image to check the alt-text.

### Step 7: Add alt-text to our starter code (cont.)

Not working the way you want it to? Try these debugging tips:

- Is your alt-text *inside* your **img** tag?
- Do you have quotation marks **" "** around your alt-text?
- Did you spell your attributes and tags correctly? Remember that HTML is case sensitive!
- Did you use an equal sign **=** after calling the **alt** attribute?
- Are you viewing your website in the live view on a separate tab?



Check your code on page 7 in the Reference Guide.

### Step 8: Wrap Up (2 mins)



Thinking about accessible design as we create new products is extremely important for both digital and physical products. Let's take a moment to revisit our question from the beginning of the activity. **Set a timer for 2 minutes** and answer the question below.

How does the design of a website affect the way you take in information?

Take a moment to reread your response from the beginning of the activity and compare it to your response now. Think about how your response may or may not have changed and why. Remember that when designers, engineers, programmers, etc. plan for accessibility at the start of a project, it benefits everyone.

## Step 9: Extensions (10-30 mins)

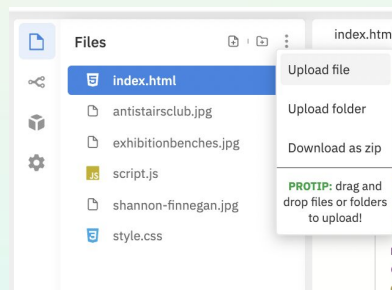


In this activity we learned and implemented one type of accessibility feature, alt-text for images. There are so many features that can help increase the accessibility of a website, take the time to explore some of our suggestions below!

### Extension 1: Personalize your website to be about you! (20-30 mins)

Right now your website is about Shannon Finnegan and her work, but it doesn't have to be! Change the photos and text to be about you and highlight your own work and hobbies!

- ❑ **Start a new repl by fork your website.** Click on the name of the project and select the **Fork** button on the bottom-left side of the project description window.
- ❑ **Change the name and project description of your repl.** Be sure to include your first and last initial of your name!
- ❑ **Upload new images to include on your website.** Open the Files menu and drag-and drop your image files in the Files pane. Alternatively you can click the three dots on the top-right corner of the Files pane and select the **Import File** option. Take note of the name of each image file, this will be how you link to your images using the **src** attribute in the **img** tag.
- ❑ **Add/Change the content on your website.** Remember that we use tags in HTML to add elements on our website.



#### Extension Resources

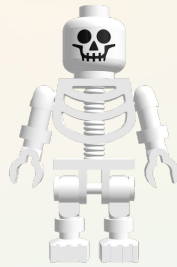
Below are some helpful resources we used to create this Extension. These will help you get started, but remember that there are lots more resources only a search engine away!

- [HTML elements](#)
- [HTML attributes](#)

## Extension 2: Updating Color Contrasts (10-15 mins)

In this activity we learned about HTML and how to structure a webpage using HTML elements. But it didn't look that pretty. HTML doesn't mess with aesthetics or presentation - that's all **CSS**.

CSS, or **Cascading Style Sheets** describes what kinds of presentation rules – or styles – should be applied to HTML elements. For example, if you wanted to make the text larger or smaller you would do that using CSS. CSS allows you to change the way content on your website looks, including text color, text size, the fonts used, background colors or images, and so much more. CSS rule sets go in their own file with the extension `.css`. Usually it is called `style.css` or `styles.css`.



HTML



CSS

From `index.html` file:

```

4  <head>
5      <meta charset="utf-8">
6      <meta name="viewport" content="width=device-width">
7      <title>repl.it</title>
8      <link href="style.css" rel="stylesheet" type="text/css" />
9      <script src="script.js">
10     </script>
11 </head>

```

Import the website style sheet!

Color plays an important role in highlighting text and making a website more visually interesting. However as we think about changing and introducing new colors we should make sure that everyone is able to view differences in colors. About 4.5% of people in the world have color blindness. There are also many varieties of color blindness that affect sensitivity to various colors. This is a lot to keep track of but luckily there are tools that simulate color blindness. In this extension you will add color to your website while also using a color blindness tool to check the colors you use are accessible.

Shannon Finnegan



## BIOGRAPHY

Shannon Finnegan is a multidisciplinary artist, which means she combines multiple forms of art, who raises awareness and educating about perception on accessibility in public spaces. They gained a lot of attention based for their work on placing benches in inaccessible places such as parks, museums, and galleries. Their benches not only created a place for people to rest and take a break, but also educated others about the lack of accessibility in these spaces. Some of these benches can be seen with a simple message such as "THIS EXHIBITION HAS ASKED ME TO STAND

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[Sample project for extension 2.](#)

- ❑ Open the **style.css** file. In the Files menu, select the **style.css** file in the File pane.

- ❑ Add a **background** rule in the **body** ruleset to change the color of the background. In the style.css file, there are a total of 3 rule sets: **body**, **img**, and **h1**. Each of these rule sets controls the styles of elements with the same HTML tag. Between the curly brackets **{ }** of the first rule set, **body**, add a new line and follow a similar structure:

```
body {
  Font-family: 'Roboto', sans-serif;
  margin: 0;
  background: blue;
  color: colorName;
}
```

Replace **colorName** with either the name of a color (blue, black, red, etc.) or the color value in HEX or RGB. You can use the [Color Picker](#) to find the color values of any specific color!

- ❑ Add a **color** rule in the **h1** ruleset to change the color of the top header text on your website. Between the curly brackets **{ }** of the third rule set, **h1**, add the **color** property to change the text in the **h1** HTML tag, which currently says "Shannon Finnegan".
- ❑ Check your color contrast using the [Color Contrast Checker](#). This checker will allow you to make sure that your colors have tones different enough to meet accessibility standards.
- ❑ Use a color blindness simulator to check the colors are viewable for everyone. Download either the [Colorblinding Chrome Extension](#) or [Let's get color blind Firefox Extension](#). Using the extension, toggle between the different color blindness simulations. Make necessary changes to your colors.

### Extension Resources

Below are some helpful resources we used to create this Extension. These will help you get started, but remember that there are lots more resources only a search engine away!

- [CSS Syntax](#)
- [CSS Background Properties](#)
- [Color Picker](#)
- [Background Gradient Generator](#)
- [Color Contrast Checker](#)
- [Colorblinding Chrome Extension](#)
- [Let's get color blind Firefox Extension](#)

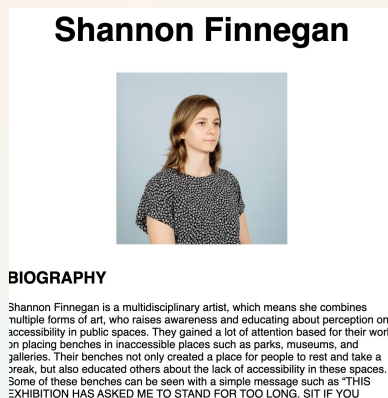
Here is a link to our [solution code for extension 2](#). We recommend trying it yourself first and using this resource when you get really stuck or want to check your work.



### Extension 3: Add headings within text (10-15 mins)

Web developers use heading tags in HTML to help organize text on a website. Headings are used to determine titles and subtitles within text. This differs from the **p** tag which represents generic paragraph text. Headings often default to different sizes, where an **h1** heading will be the largest text size down to an **h6** being the smallest heading text size. Programmers can also add CSS style rules to change the font, alignment, size, and color for each of the heading tags. Most importantly, headings allow people who use screen readers to easily navigate through a website. They may choose to first jump between **h1** tags before looking more closely at smaller headings.

You may have noticed that in our starter code all text uses a **p** tag except for the very first text, the title of the website. In this extension we will be adding heading tags (**h1**, **h2**, **h3**, **h4**, **h5**, **h6**) to organize the text on the website.



#### Sample project for extension 3

- ❑ **Open the `index.html` file.** In the Files menu, select the `index.html` file in the File pane.
- ❑ **Determine which texts should be updated to be a heading.** Headings are typically used to indicate a new section of a text. In our sample website, you might identify the text "BIOGRAPHY" as a section header.
- ❑ **Update HTML tags to header tags (**h1** to **h6**).** Take note that the title of the website "Shannon Finnegan" uses an **h1** tag. This means that other text should most likely use an **h2** to **h6** tag instead. Remember that not all text needs to use a heading tag, it is appropriate to use **p** tags for any paragraph text.
- ❑ **Optional: Add CSS styling for your new heading tags.** Now that you have distinguished between the text on your website, you can take it a step further by adding different color, font size, etc to your different headings.

#### Extension Resources

Below are some helpful resources we used to create this Extension. These will help you get started, but remember that there are lots more resources only a search engine away!

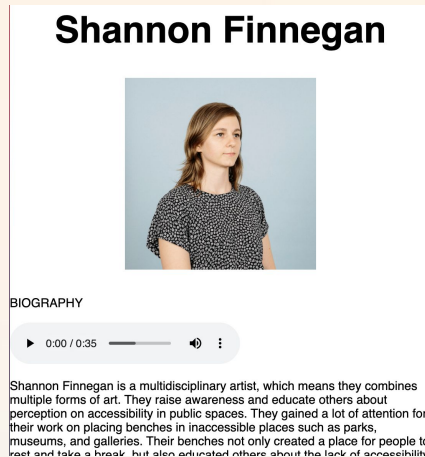
- [HTML headings](#)
- [CSS Syntax](#)

Here is a link to our [solution code for extension 3](#). We recommend trying it yourself first and using this resource when you get really stuck or want to check your work.



## Extension 4: Record audio narrations (20-30 mins)

Some people prefer to hear a human voice as opposed to the computerized voice of a screen reader. In this extension we will narrate the text in each section and add them to our website.



### [Sample project for extension 4](#)

- ❑ **Use any recording software to record your narration for the text.** You may use your phone, computer, or this [online voice recorder](#). We found that saving your audio files in an mp3 format works best when adding to your website.
- ❑ **Upload your audio files to your repl.** In the Files menu on your repl page, select the three dots in the top-left corner of the files pane and select the **Import File** option. Alternatively, you can drag and drop your audio file into the Files pane.
- ❑ **Open the [index.html](#) file.** In the Files menu, select the [index.html](#) file in the File pane.
- ❑ **Add the audio tag where you want to add your narration to your website.** Locate the areas to add your narration and add the audio tag. You should follow a similar structure below:

```
<audio controls>
  <source src="audioFile.mp3" type="audio/mp3">
  Your browser does not support the audio tag.
</audio>
```

Replace [audioFile.mp3](#) with the name of your audio file!

### Extension Resources

Below are some helpful resources we used to create this Extension. These will help you get started, but remember that there are lots more resources only a search engine away!

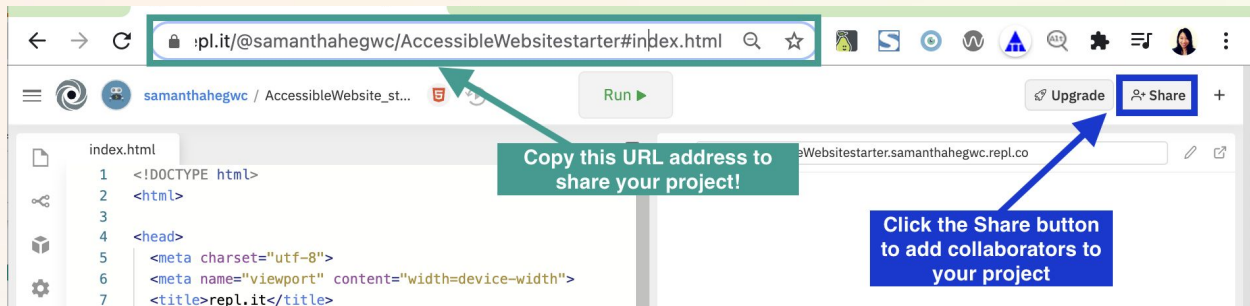
- [HTML audio tag](#)
- [Online Voice Recorder](#)

Here is a link to our [solution code for extension 4](#). We recommend trying it yourself first and using this resource when you get really stuck or want to check your work.

## Step 10: Share Your Girls Who Code at Home Project! (5 mins)

### View only access (1-2 mins)

Sharing your work on Repl.it is easy! Just copy and paste the URL address of your Repl project in the web address bar at the top! This will allow others to run your project, view your code, and fork your project and remix on their own! **Be sure to share this link on your social media accounts and don't forget to tag @girlswhocode #codefromhome and we might even feature you on our account!**

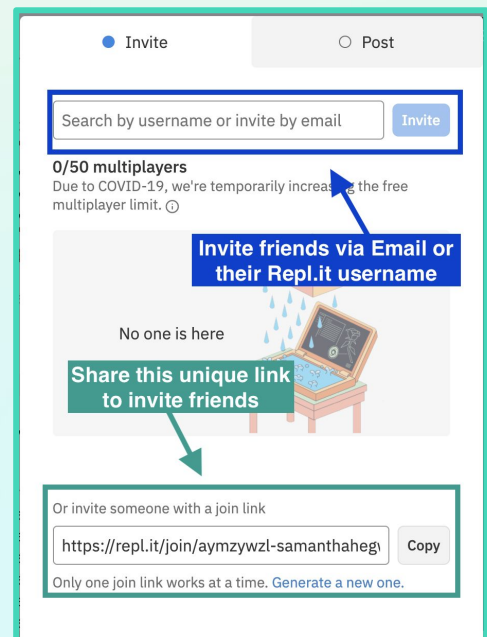


### Adding collaborators (2 mins)

If you want to work with a group of friends on a project, you can easily invite them to collaborate using the **Share** button at the top-right of the window. This should pop out a new window with two options for inviting others to collaborate on your project.

- ❑ **Invite by email or Repl.it username.** This option allows you to share your project with specific people by typing in their email address or Repl.it username if they already have an account with Repl.it. We recommend this option to ensure that you are sharing your project with the correct people!
- ❑ **Share invite link.** At the bottom of the window there is a unique invite link. You can copy and paste this link to friends which will allow them to access your project.

**Note about collaborators:** Remember that adding collaborators gives others edit access to your project. This will allow them to change your code, name, and description. **DO NOT share your invite link on social media!** Be selective on who you share these edit rights with.



Stay tuned for more Girls Who Code at Home activities!