WEB DEVELOPMENT

# OVERVIEW

# In this lesson, participants will learn about the basics of web development. In particular, participants will learn the basics of HTML and CSS, and how to use these tools to build their own webpages. This lesson plan is accompanied by a PowerPoint presentation with speaker notes. There are two activities detailed in the lesson plan with corresponding worksheets.

# LEARNING GOALS

* Understand how to use basic HTML
* Understand how to use basic CSS
* Be able to apply HTML and CSS to build a webpage

# OVERLAP WITH BC CURRICULUM

1. Simple algorithms
2. Computer system architecture
3. Strategies for identifying and troubleshooting simple hardware and software problems

# TECHNICAL REQUIREMENTS

1. The instructor should have access to a computer, a projector to show the powerpoint presentation, and a printer to print off activity worksheets.
2. Each student should have access to writing utensils and a computer capable of accessing the internet.

# FACILITATOR INSTRUCTIONS

* The instructor should read through the activities and preview the powerpoint to familiarize themselves with the content and key terms.
* The instructor should familiarize themselves with the websites used by students to create their personal websites (CodePen). Please see the CodePen Instructions appendix for detailed instructions.

# INTRODUCTION: POWERPOINT

Start the lesson by presenting slides 1-3 of the powerpoint. Students will learn what a website and webpage are.

# HTML: POWERPOINT

Present slides 4-9. Students will learn the structure of HTML and some basic tags.

# ACTIVITY 1: HTML WORKSHEET

## OVERVIEW

In this activity, participants will recreate web pages by properly placing tags in an HTML document.

REQUIRED MATERIALS (per student)

* Writing utensil and a printed copy of Activity 1 - HTML Worksheet.

## POWERPOINT

This activity is related to slide 10.

## ACTIVITY STEPS

1. Distribute Activity 1 - HTML Worksheet to each student.
2. Instruct students to write the correct HTML tags in each numbered grey box to recreate Webpage #1.
3. After students have completed Webpage #1, use the Solution to Activity 1 - HTML Worksheet to go over the correct answers to Webpage #1.
4. Instruct students to write the correct HTML tags in each numbered grey box to recreate Webpage #2. Note that, for Webpage #2, HTML tags can be used more than once.
5. Go over the correct answers for Webpage #2.

# STUDENT’S WEBSITE - HTML: POWERPOINT

Present slides 11-27. These slides will guide the students in creating their website on CodePen (see additional instructions in Appendix 1) and adding basic HTML features.

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# CSS: POWERPOINT

Present slides 28-35. Students will learn the basics of how to add styling to webpages using CSS.

# ACTIVITY 2: CSS WORKSHEET

## OVERVIEW

Building on Activity 1, participants in this activity will recreate a web page by properly placing CSS declarations, in addition to HTML tags, into an HTML document.

REQUIRED MATERIALS (per student)

* Writing utensil and a printed copy of Activity 2 - CSS Worksheet.

## POWERPOINT

This activity is related to slide 36.

## ACTIVITY STEPS

1. Distribute Activity 2 - CSS Worksheet to each student.
2. Instruct students to write the correct HTML tags and CSS declarations in each numbered grey box to recreate the webpage.
3. Go over the correct answers for the activity.

# STUDENT’S WEBSITE - CSS: POWERPOINT

Present slides 37-41. These slides will guide the students in adding styling to their webpages they previously created. Instructions for the students to save their websites can be found in Appendix 1.

# THANK YOU!

# 

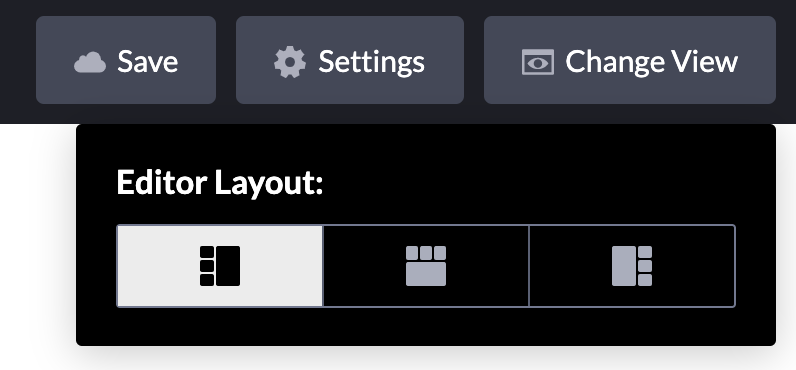
# APPENDIX 1: CodePen Instructions

Getting Started Coding

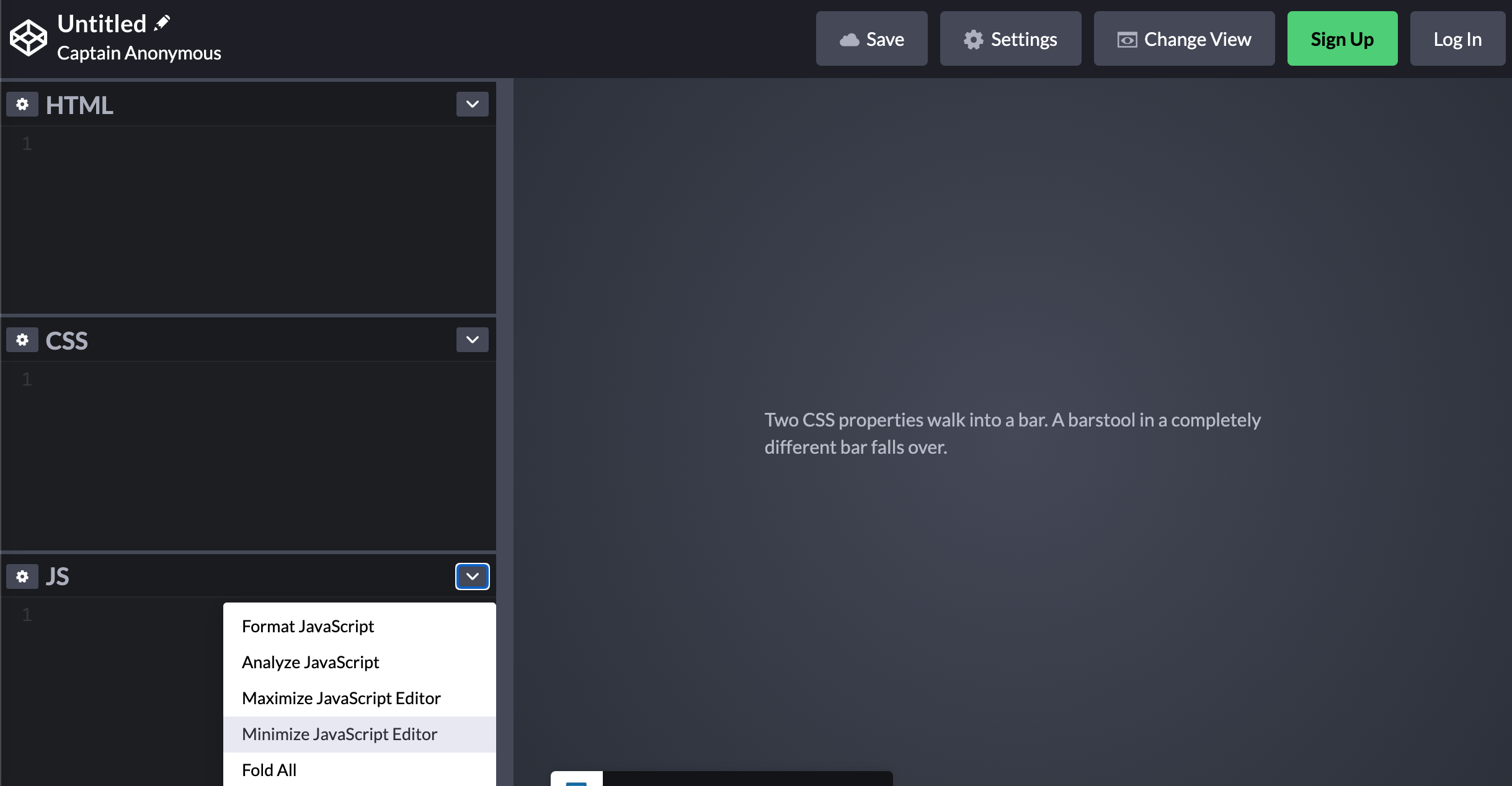
1. Go to the link <https://codepen.io/> .
2. Click on the rainbow “Start Coding” button.



1. Click on the “Change View” button, and select the left-most editor layout.



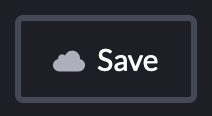
1. On the left side of the screen, in the section with the title “JS”, click the down arrow and then select the option “Minimize JavaScript Editor”.



1. You are now ready to start coding! If you add HTML and CSS into the editor windows on the left side of the screen, you will see changes to your website/Pen appear on the right section of the screen.

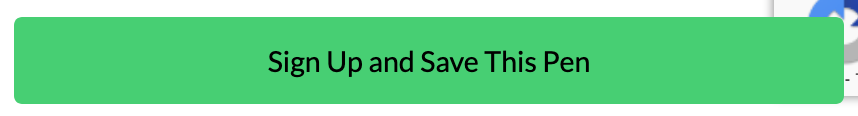
Saving Your Website (optional)

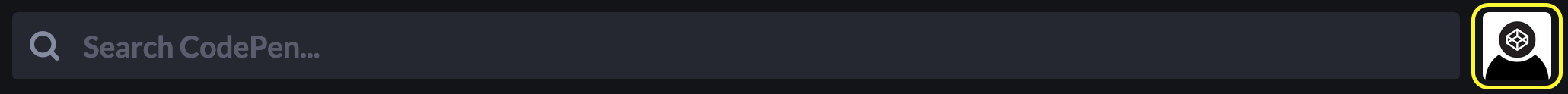
1. If you would like to save your Pen so that you can keep working on it later or show it to others, click on the “Save” button at the top of the screen.



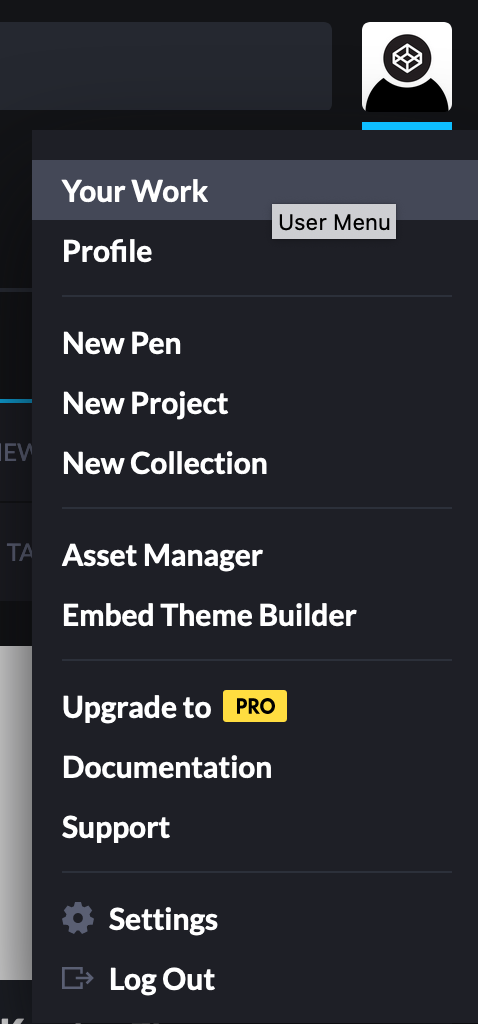
1. Next you will be asked to either log in, or sign up for CodePen. If you already have an account, login. If not, keep following the directions below.
2. Click on “Sign Up for Codepen” at the bottom of the window.



1. Enter a name, username, email and password in the specified fields. Click the “Sign Up and Save This Pen” button.
2. You now have a CodePen account and can access your Pen whenever & wherever you’d like! To see your saved Pens when you are logged in, click on your profile picture in the top left corner of the screen.



1. Then click on the “Your Work” option in the drop-down menu



1. This is where all your Pens are stored! To keep working on one, just click on the Pen you want to edit.

