**DigitalCrafts, LLC**
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# Welcome!

Dear Builder,

We are thrilled you have decided to pursue your passion for technology with DigitalCrafts. Throughout our program, you will learn a myriad of exciting new skills and make long-lasting friendships in the process. You will learn the ins and outs of web development, all with industry experts and a room full of peers. We know learning complex languages and programmatic concepts is an exciting yet daunting prospect, and we are dedicated to supporting you through the ups and downs of this shared adventure.

We also want you to know how much we sincerely appreciate you placing your trust in our team, a responsibility we do not take lightly. Throughout class, we will ask for your regular and honest feedback to ensure we meet and exceed your needs and expectations. If at any point you have a question, concern, recommendation, or just want to chat, please don't hesitate to let us know. We're here to help.

See you soon,

**The DigitalCrafts Team**

*"Do not underestimate the value of typing confidently. Even if you feel pretty comfortable, practice regularly!*

*-D. Colon, M. Hill, DigitalCrafts alum and DiR*

*"Trust me: do the pre-work, and focus on JavaScript. Read through the MDN Topics in their entirety! Have fun & good luck!"*

*- S. Zimmerman, DigitalCrafts alum.*

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# Prerequisite Assignments

Some of these assignments may come easily to you and others may be challenging. Please do not look at the volume of material and unfamiliar concepts as an insurmountable challenge. Also, do not feel like you have to memorize everything contained in the below assignments, as repetition and everyday use will play a crucial role in instilling these core concepts. This is more about muscle memory and familiarization. That said, excessive preparation never hurt anybody, and I encourage you to further experiment with the concepts covered below on your own.

### STUDENTS NEW TO MAC

**Macs are no longer required for the course but are still strongly encouraged**. If you do not have a Mac, Windows 10 can be used only if you install WSL 2. (Our instructors will be using Macs). Reference this blog post to ensure your Windows computer meets the class requirements: https://www.digitalcrafts.com/blog/improving-accessibility-students-can-now-use-pcs-digitalcrafts-bootcamps

**If you're new to Mac, showing up on day 1 with a new Mac and trying to keep up is going to be very difficult if you're not already familiar with the OS.** Macs are great machines for programming, but there's definitely a learning curve getting used to working with one. Resources are abundant online, so use them if needed, but there's no substitute for just using the thing as much as possible before class. Get comfortable with it; your machine is your livelihood!

## Assignment #1 - Command Line

**REQUIRED**
Complete at least one of the following:

A. Complete Labs 1 and 2 of the LabEx's "Practice Linux Commands Exercises"
These lessons help you learn about navigating your way around your command line in a Linux environment. We will be using Bash/Z-shell in class but the commands are the same. (Only Labs 1 and 2 and required for general understanding of the terminal but you can always keep going!).
https://labex.io/courses/linux-basic-commands-practice-online (7 Day Free Trial)

B. Complete Chapters 1-3 of the Command Line track on Codecademy. Familiarizing yourself with your computer's terminal will make your life as a developer easier and will give you a foundational understanding of how to communicate with your computer. Chapter 4 is recommended, but not required. Students are not required to have a subscription to Codecademy as part of our course. We recommend doing as many exercises as possible with the free 7 day trial.
https://www.codecademy.com/learn/learn-the-command-line
(Utilize free trial if offered or skip)

C. Zed Shaw's Command Line Crash Course. It requires you to practice in your own terminal, but he offers excellent explanations.
https://learnpythonthehardway.org/book/appendixa.html (Free up to lesson 13)

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# Assignment #2 Python

*(For Full-Time Students only)*

Python is the first language we will learn in the Full-Time program, and we will use it to cover the basic concepts of programming. It's okay if you finish and still have questions. We will be covering these concepts in more detail during class.

**REQUIRED -** If you really enjoyed working with LabEx in Assignment #1, they also offer a good Python course. Complete Labs 1 and 2 and the first Challenge. (Of course you are welcome to keep going and do them all!)

https://labex.io/courses/intro-to-python-3 (7 Day Free Trial)

**(ALTERNATIVE)**

Complete the Python track on Codecademy. To answer a commonly asked question: we'll be learning Python 3, but the differences between 2 and 3 are minimal when it comes to the basics, so no worries if you stick with the free lessons on Python 2. Students are not required to have a subscription as part of our course. We recommend doing as many exercises as possible with the free 7 day trial.

https://www.codecademy.com/learn/learn-python

**OPTIONAL**

Consider purchasing and working through the book **Learn Python the Hard Way** (don't worry; it's not too hard!). It's not free (usually ~$29), but has been a student favorite. It is highly recommended that you complete **Command Line** before delving into Learn Python the Hard Way, as it requires you to run Python scripts from your command line. A final note: the author, Zed Shaw, uses Atom as his text editor (where you'll be writing your code). You may use whichever text editor suits you, but we generally recommend using Visual Studio Code. It's most likely what you'll use in class.

https://learnpythonthehardway.org/ **(digital version)**

https://www.amazon.com/Learn-Python-Hard-Way-Introduction/dp/0134692888/ **(paperback)**

https://code.visualstudio.com/ **(Strongly recommended)**

**OPTIONAL**

Consider reading through the digital book **Automate the Boring Stuff with Python, 2nd edition.**

https://automatetheboringstuff.com/2e/chapter0/ **(free digital version)**

https://www.udemy.com/course/automate/?couponCode=FEB2020 **(paid video tutorial version)**

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# Assignment #3 MDN (Mozilla Developer Network)

**REQUIRED**

Read and complete *Getting started with the Web* on the Mozilla Developer Network (MDN). Mozilla has extensive documentation on all things web development, and their starting guide will teach you the basics. It will also allow you to get your feet wet by creating a simple web page. Each topic will briefly guide you through a different aspect of making a web page, from HTML, to CSS, to JavaScript. You are not required to go through the "Publishing your website" section, but it will expose you to basic website deployment.

When you are finished with the guide, go through each section under "Related Topics" (on the left side of the page) and take notes on each section. Start by skimming each section and writing down unfamiliar words. Then, research what those words are. (Try using MDN to find the answers - the documentation is vast and you will be using it a lot in class). Use your newfound knowledge to modify the site you made in the guide. Make a small "About Me" site using your own personal style!

https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web

# Assignment #4 Git and GitHub

**REQUIRED**

Watch the video below on Git and GitHub. These tools are essential for working collaboratively in the world of development and also provide a safety net for adding new features to your applications. (NOTE: The video goes through installation, but if you have finished the Xcode section, you should not need to install Git; it is packaged with Xcode. You can run this command anywhere in your terminal to make sure Git installed correctly: git --version If it displays an error or outputs nothing from this command, try reinstalling Xcode or follow the steps in the video to install Git manually.

https://www.youtube.com/watch?v=SWYqp7iY_Tc

Once you've watched the video, go ahead and create a free account on Github. When choosing a username and profile picture, remember that prospective employers will likely be looking at your Github profile one day! https://www.github.com

Now that you have an account, try to initialize a Git repository in the directory (folder) holding your 'About Me' page from Assignment #3. Make sure the directory ONLY holds the files relevant to Assignment #3!! Once you have created the repository and committed your files, follow the steps from the video to upload your repository to your GitHub account. (If using Git and Github in the terminal still seems overwhelming, you can follow the steps for publishing to GitHub Pages from the MDN tutorial in Assignment #3.)

Once you have done this, post a link to your GitHub page or GitHub repository in our cohort's Slack channel so everyone can see your awesome work!

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**ENCOURAGED**

Familiarise yourself with the interactive app that teaches beginner Git + Github. This application contains challenges for learning Git and GitHub—by using real Git and GitHub, not emulators. You'll be learning the awesome (and not so scary) command line and GitHub which means when you finish all of the challenges you'll have real repositories on your GitHub account and green squares on your contribution chart.

Getting started, open Git-It (download and instructions in link) and click the button to begin the first challenge. Have your terminal and text editor open, too. Follow along with the instructions in each challenge and use the terminal or editor as instructed.

When you've completed the steps in a challenge click 'Verify'. Depending on the challenge you may need to also select the folder you did your work in for Git-it to verify. Don't worry if you don't get all the concepts completely. This is just to get you additional exposure which may give you a headstart as we will be using the Git and Github throughout the course. https://github.com/jlord/git-it-electron

**OPTIONAL**

Complete the labs for "Learn Git from scratch". It will walk you through setting up your git environment in your bash terminal and basic commands. Don't worry if you don't get all the concepts completely. This is just to get you additional exposure which may give you a headstart as we will be using the Git and Github throughout the course. https://labex.io/courses?tag=Git (Free)

## Assignment #5 HTML & CSS

**STRONGLY RECOMMENDED**
Do one of the following:

A. Read ***Basic Web Pages Nº 2. of HTML & CSS Is Hard***.
https://www.internetingishard.com/html-and-css/basic-web-pages/

B. Complete Basic HTML and Basic CSS on FreeCodeCamp (first two sections under *Responsive Web Design Certification*). https://www.freecodecamp.org/learn

**OPTIONAL**

C. Read chapters 1-40 of ***A Smarter Way to Learn HTML & CSS***, and make sure to do the exercises! The Kindle version is $8 (which you can read on your computer and smart devices), but this book series has been deemed "most helpful resource by far" by our students and alumni. There are a lot of chapters, but they're generally short, to the point, and double as a great reference throughout class. If you get through the required chapters and want to continue, by all means do so! We will not use this book in class.
http://amzn.to/2a9pQNO

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# Assignment #6 Javascript

**ENCOURAGED**

Much of the course will be in Javascript - so it's a good idea to get comfortable with the language. Here are a few resources to help you get started.

A. Basic Javascript lesson in FreeCodeCamp (first section in *Javascript Algorithms and Data Structures Certification*)

B. Read chapters 1-21 in ***Eloquent Javascript 3rd Edition***, and make sure to do the exercises! https://eloquentjavascript.net/

C. LearnJS: walks through some general programming concepts using Javascript

   https://www.learn-js.org/en/Welcome(Free)

D. Javascript30: Feeling like stretching your Javascript muscles? Want to try building some applications that have real-world functionality? Try out Javascript30. This is a free resource that gives you tutorials for 30 different Javascript-based projects. It is highly encouraged you do the previous assignments before embarking on this one, as it assumes you know at least the very basic concepts of creating a web page. https://javascript30.com/(30 day Free Trial)

**OPTIONAL**

Much of the course will be in Javascript - so it's a good idea to get comfortable with the language. Here are a few resources to help you get started.

E. Read chapters 1-25 in ***A Smarter Way to Learn JavaScript***, and make sure to do the exercises! Before class is over, you'll likely have read or referenced most of the concepts covered in the book. If you have time, try and get through chapter 44 or beyond. http://amzn.to/1SOPY1v

# Assignment #7 Typing Practice

**REQUIRED**

Typing practice! We move quickly in class, and the characters used throughout programming are probably not what you're used to. If your typing skills aren't as polished as you might wish them to be, this is a good place to get your hands and mind familiar with looking and writing code. Spend 15 minutes a day practicing and you'll be poised for a strong start! An average professional typist reaches 50 to 70wpm. As a programmer if you can type 40+ words per minute you can make sure **typing** doesn't hinder your thoughts. https://typing.io/(Free Scissor Switch Plan)

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## Finished Everything Above? Keep Going!

**FreeCodeCamp**
Get as far as you can on FreeCodeCamp. Many of our students speak highly of this resource, and it does a good job of getting you out of the in-browser editors like Codecademy, and into actually building things. That's what we're all about! https://www.freecodecamp.com/

**More CSS**
Students have found the following CSS learning tool extremely helpful. Most come in thinking CSS will be the easy part, but then are surprised at its many intricacies, especially surrounding *positioning*. Please follow this along in its entirety! You'll be glad you did. http://learnlayout.com/

## Assignment #8 Codecademy

*(For Full-Time Students only)*

**Codecademy**
Complete the '**HTML & CSS', 'JavaScript', and 'Python' tracks** on Codecademy. Please do not sign up for the Pro version of Codecademy unless you would like to continue using their platform. Students are not required to have a subscription as part of our course. We recommend doing as many exercises as possible with the free 7 day trial.

Yes, the in-browser editor can be a bit frustrating at times when you can't determine an error, but this is a solid tool that will get you familiar with the syntax of the technologies you will be learning. If you hit a wall or errors somewhere, just keep moving, this is more about muscle memory and familiarization than memorization. https://www.codecademy.com/

## Assignment #9 Codecademy

*(For Part-Time Students only)*

**Codecademy**
Complete the '**HTML & CSS' and 'JavaScript' tracks** on Codecademy, the Part-Time program does not cover Python. Please do not sign up for the Pro version of Codecademy unless you would like to continue using their platform. Students are not required to have a subscription as part of our course. We recommend doing as many exercises as possible with the free 7 day trial. If you hit a wall or errors somewhere, just keep moving, this is more about muscle memory and familiarization than memorization. https://www.codecademy.com/

## Keep us up to date on your progress!

Tag #weBuildTheWeb and we'll guarantee you at least one 'like'!