Welcome to the Web Development Bootcamp
Winter 2021

Foreword

Welcome to the first step in your new journey! We are excited to meet you, to learn about you, to challenge you, to support you, and to help you make your big next move. By signing up for this course, you've told us you are ready for a change. This packet will help you get started. Whether you are embarking on a whole new career or gaining skills in a field you've explored for years, your future self thanks you for investing in lifelong learning and growth. Dive into the material, and get ready for Day One!

Peggy Yu

Peggy Yu, CEO of Stack Education

Getting in the Mindset

Just because you're embarking on a new beginning doesn't mean you have to be a beginner. There are many helpful resources that can help you prepare for your first day of class. We love well-researched students. There are three key components of a successful student that you can get started on right now:

1. **Technical Knowledge**
2. **Time Management**
3. **Positive Attitude**

To succeed not only in this course but also in your career advancement afterwards, it's essential to invite change into your life. Take this time to reflect on how you can welcome personal and professional development. Throughout the course, you will learn not only how to perform technically, but also how to project professionalism. Students who are willing to grow as people are the most successful in developing their careers. If you come to class ready to learn and invest in yourself, you will be capable of seizing your highest potential.

Work through this packet and make sure you check off each section before day 1. Before you begin, help us learn more about you.

☐ **What type of learner are you?**
[Please complete this survey.](#)
This assignment should be completed as soon as possible so your instructor can review it in advance of the course. The goal of this survey is to help our instructors better address the needs of students. It is important for us to be aware of your skills and background to better plan the course structure.

1. Technical Basics

Your First Assignment: Prework

It's time to get started! Below is important setup work to complete before the program begins. This will help you and your cohort hit the ground running on Day One. Consider this your first assignment.

☐ **Install Chrome or Firefox**

Both Chrome and Firefox ship with powerful developer tools that make them excellent browsers for software developers to use. If you already use one of these browsers, you are all set, we will discover all these extra tools throughout the course. If you typically use a different browser please take a moment to install one of these browsers. Either Chrome or Firefox is fine, the developer tools for these browsers behave very similarly.

☐ **Install Node.js**

What, exactly is Node.js? This is a question best answered later, but for now, here's a simple explanation by Quora user and former Spotify Software Engineer, Mattias Petter Johansson:

> "JavaScript is a language. Node.js is not a language or a special dialect of JavaScript - it's just a thingamabob that runs normal JavaScript.

> All web browsers have JavaScript engines that run the JavaScript of webpages. Firefox has an engine called Spidermonkey, Safari has JavaScriptCore, and Chrome has an engine called V8.

> Node.js is simply the V8 engine bundled with some libraries to do I/O (input/output, like reading files or writing files) and networking, so that you can use JavaScript outside of the browser, to create shell scripts, backend services, or run on hardware."

The Node run-time environment includes everything you need to execute a program written in JavaScript. We will go into this in much more detail in the first week of class, but for now, you need to get Node.js installed on your laptop. Sometimes, issues can come up while installing Node.js, so try to be resourceful and get it running. Expect to run into challenges, so don't get discouraged if you do.

- Follow this guide for Mac
- Follow this guide for Windows

☐ **Install VScode**

VScode (Visual Studio Code) is a code editing tool. If you're unfamiliar, think of it like a text editing software like Microsoft Word, but instead of making it easier to write documents, it makes it easier to write code. From formatting to color coding, and in some cases helpful tools to complete your code itself, it makes writing code much more intuitive and efficient.

- Read about it here.
- Download and install it here.

☐ **Configure VScode**

Follow this VS Code Configuration Guide, which will help you learn how to get the most out of VS Code. This is an extremely helpful walkthrough, as most of your time coding will be spent in VScode.

☐ **Install Git**

Git is a version control system for your code. It's a way to save your code in a state that you can go back to later. Let's say you make a change to your code and break your application - you can go back to a previous version you've saved through Git.

But Git as a system would only save on your computer. So if, for example, in your frustration at breaking your code, you were to throw your laptop out the window (pro tip: this is not recommended), any versions saved in Git would also be lost. Enter GitHub.

GitHub is a website for saving your Git version online. Much like Dropbox keeps your files safe on a server, so too does Git. Another analogy might be that your camera is to Instagram as Git is to GitHub. Your camera and Git are the tool, Instagram and GitHub are the websites that host the content

GitHub serves as much more than a backup system for your code. For example, it is also a place to host your projects for others to see, like a portfolio of your coding projects.

- Follow this guide for Mac to install Git.
- For windows users, you should download Git For Windows here which will give you a Git Terminal that will behave like the Mac one, and will allow you to use the same commands and processes as those on MacOS. Then, follow the same guide as above. Make sure to sign up for GitHub as the guide suggests.

☐ **Install Postman**

Postman is a tool used by many software developers to interact with APIs, backend systems that utilize the HTTP protocol. In this course we will learn the inner workings of the HTTP protocol as well as how to interact with and even build our own APIs. You can learn more about Postman and sign up for the free version and download the app here. Don't worry if a lot of this doesn't make much sense yet - you will become fluent in all of this during the bootcamp!

☐ **Install MySQL Server and Workbench**

MySQL is a database server. Databases are the most common data storage system for software systems, by installing MySQL server on your machine you will be able to create databases for your software projects locally on your machine for development purposes. We will also be installing Workbench which is a client that allows you to interact with these databases in the same way that a browser is a client that allows you to interact with the internet.

- *For Windows*
  - You can find the [Windows installer here](#) (choose the larger file). This installer will allow you to install the server as well as Workbench. Be sure you choose MySQL Workbench and MySQL Shell when selecting your installation options.
- *For Mac*
  - You can [download the Mac dmg for MySQL Server here.](#) Then follow the wizard to install the server. [As for Workbench, you can download the dmg for that here](#). Simply open the dmg and drag the Workbench icon to the Applications folder as shown.

☐ **Get Acquainted with the Command Line**

This assignment is NOT graded, so don't worry if you think you're bombing it, or unable to find the answers. Do your best, and help us learn about you and what your needs might be in our program.

Part 1: Follow this written walkthrough of how to use the Command Line on your machine

- The version for [Mac and Linux is here](#)
- The version for [Windows is here](#)

Part 2: Take this short quiz on using the Command Line. Make sure you use the correct version for your machine.

- The version for [Mac and Linux is here](#)
- The version for [Windows is here](#)

☐ **Watch this Video: The Myth of the Genius Programmer**

[In this relatively ancient video](#), Google engineers present a case against the myth of the genius programmer. As you'll see in this program and hear about in this video, great programming doesn't require a genius, but it often does require collaboration and iteration (and the same is true for innovation). So prepare to be challenged and get comfortable making mistakes and failing.

☐ **Get Your Feet Wet: Try Some Free Coding Games**

Getting a head start with Javascript can make your first few weeks of class easier.

- [CodeWars](#)
- [CodinGames](#)

☐ **Take the Precourse Assessment**

[Finally, take this precourse assessment](#). This may be a challenge, and you're not expected to know all of the answers. Read the instructions carefully before you begin - it will help us teach you more effectively.

2. Time Management

How do you approach a task? What is your priority each day? Are you a planner?

☐ **Watch this Video: Student Success - Time Management**
[This video was created with undergraduate students](#) in mind but the animation is excellent and content is relevant. We can all apply these skills to our lives and won't improve without the time for self reflection.

☐ **Build your toolkit**
What tools do you have at your disposal for organization? Juggling school with family and work commitments can seem overwhelming without help. [Here are 16 top apps for managing your time](#), we recommend picking a few to try out.

☐ **Practice your Typing skills**
Fast and accurate typing is the unsung hero of analysts. [Get some practice in here.](#)

3. Attitude and Positivity

"In order to carry a positive action we must develop here a positive vision."— Dalai Lama

☐ **Watch this Video: Emotional Intelligence Lecture from Yale University**
This lecture is an in-depth exploration of how our attitudes and awareness of them affect us. Developing a deeper awareness of your own feelings and thoughts can improve your life in many ways. These unique skills can help you be more empathetic to coworkers, persuasive in interviews, and effective in your study habits.

☐ **Craft your Personal Stress Plan**
We often acknowledge our stress when it is too late to calmly address it. You are about to start down a challenging and life-changing path that will inevitably trigger some stres. Plan ahead by drafting a plan for self-care and managing your stress when it does come. Download a step-by-step guide here.

☐ **Positivity Matters**
Read about it's value in the workplace.

There's a lot of work ahead, and we're excited for you to get started. Excelsior!