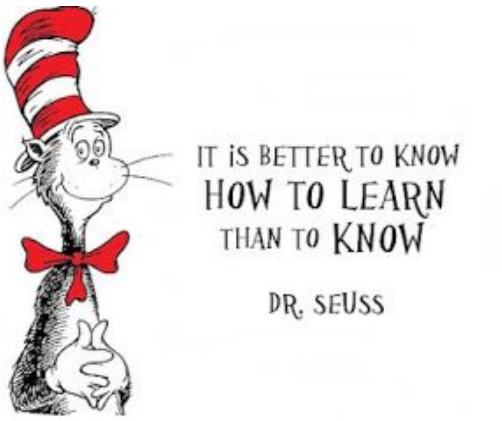
Welcome to LEARN!

First off, congratulations on making the decision to become a software developer. No matter what you've done in the past, after you've completed this program you'll be able to build a fully-functioning database-backed web app that is responsive, dynamic, and interactive. That, however, is not the greatest skill you will gain here at LEARN. Here, we aim to teach you how to learn (how to program). Technologies change quickly, and you will repeat the learning process over and over throughout your career.



Our Learning Process

At LEARN, we use a few key strategies to help you learn the concepts and languages in the curriculum. These strategies will become very familiar to you during the course, so that you can repeat them for yourself as you go to learn new languages and technologies in the future.

1. **Projects** - You will use every technology we cover in class in a project. This is training for a job where creation is the only true mark of progress. Students will be at the computers every day, learning to troubleshoot, plan, organize, and create programs. We view this as the most important part of your learning.

2. **Lecture** - Many days at LEARN will start off with lecture. Behind the technologies we teach, there are concepts and ideas that must be understood if you are to use the technologies effectively. Lectures may be given by instructors, community leaders or guest speakers, or other staff at LEARN.

3. **Repetition** - Sure, everyone learns differently, but repetition of something is necessary no matter how you learn. Every day, through a wide variety of challenges, exercises, and projects, we will practice crafting high quality code, so that in the end, you can walk into an internship, interview, or job and feel confident in the knowledge you have gained.

Technologies We Teach

HTML (Hypertext Markup Language)

HTML (Hypertext Markup Language) is the code that tells a browser what to display on your screen and has been around since 1989. Since then it has constantly evolved and is currently in its 5th generation. HTML is one of the most universal skills all web developers need to be familiar with.

CSS (Cascading Style Sheets)

CSS allows developers to alter the appearance of HTML elements on a page. It gives you the ability to position, color, size, and do many other things with the content on a web page. Together HTML and CSS allow designers to make static web pages that are visually stimulating and unique. But we want to do more than build static pages.

Bootstrap

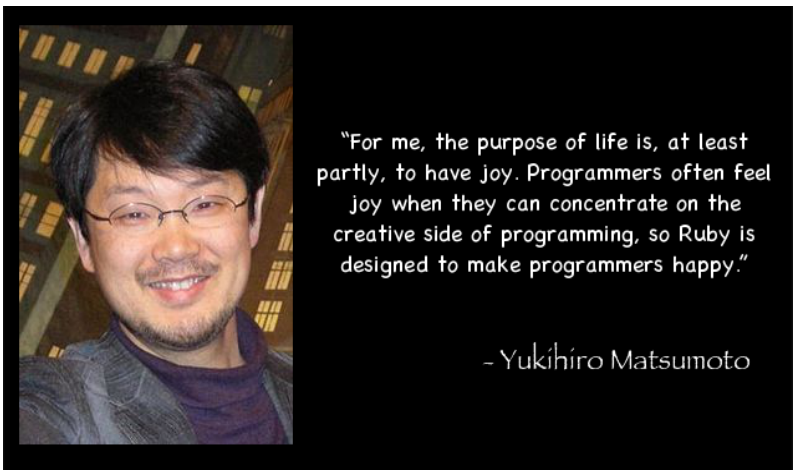
Bootstrap is a framework which combines elements of HTML, CSS, and JavaScript together in a way that is remarkably easy to use. It gives us some JavaScript functionality without having to write the code for it and helps us get a web page styled consistently

Javascript

JavaScript (often called just JS) is what allows your websites to be interactive in new and exciting ways. It gives us functionality like drop-down menus, forms that update with error text immediately, showing and hiding content on demand, and so much more. If your website were a house, HTML would be the structure, CSS would be the paint, carpet, etc, and JavaScript would be the plumbing, the electricity, and AC. JavaScript is an object oriented programming language where we create objects and then do things with those objects through functions. We will use Javascript to teach the general basics of programming.

Ruby

Ruby will be your second programming language of the course. It is a popular object oriented programming language that gained favor in Japan in the late 90s and in the U.S. in the 2000s.



The great thing about Ruby is that its creator, Yukihiro "Matz" Matsumoto, designed Ruby with programmers (You!) in mind. In Ruby there will be a little repetition of some of the JavaScript basics, but with focus on the new Ruby syntax. Ruby almost exclusively uses Objects, so your object related knowledge from JS will be easily transferable.

Postgres

If you're don't think you've ever used a database before, here's a surprise… you have. A database is, in its simplest form, a way to store information in an organized manner in a computer. Ever used an Excel spreadsheet with multiple sheets? That's a simple database. Organized your emails into different folders? You've just created a database. The type of databases that we'll be using in class are SQL based.

↑↑↑↑ What we have now ↑↑↑↑

↓↓↓↓ What we used to have ↓↓↓↓

SQL stands for Structured Query Language and is how most database backed programs send and receive information from the place where they permanently store their data. There are several SQL type database programs, but the program we'll be using is called PostgreSQL. We're going to spend a couple days on SQL so that you can understand how the database works behind the scenes, but we'll quickly transition to using the Ruby database interface called ActiveRecord.

API's

Application Programming Interfaces (or API's) play a key role in modern web development and are an absolute essential concept for your future in web development. In short, API's are a way separate applications of all types transfer information. An API is not a library or other kind of technology, instead it is a set of clearly defined methods that allow us to share and consume information generated or found by another application. In this bootcamp you will become very comfortable with consuming external APIs and designing custom JSON REST APIs.

Ruby on Rails

Ruby on Rails, or just 'Rails', is going to form the backbone of all projects we build in this course. Built on the Ruby programming language that we will already have learned, Rails is a prebuilt framework that has been incredibly popular and powerful in the development community for many years now. We will use Rails to create our own custom API.

React

A more recent figure to appear on the development scene, but it has quickly become one of the most popular new javascript libraries. Created by Facebook to manage their complex user interactions, it is a powerful and efficient way to build the front end of an application. React is built on Javascript and we will use it in class to create the user facing side of our projects by interacting with our Rails API.

Professional Development Week

In the midst of learning so much code, we take some time to start preparing the you for what comes after LEARN. To this end, we will incorporate some non-programming related material. Networking, portfolios, resumes, and cover letters are all going to be important in your future job search, so we work with you to get all of those to a good place.