Fresher to Hacker: F2H

Our Goal: You'll begin CodeGurukul with a feeling of excitement and anticipation. Twelve weeks later, you'll follow the footsteps of our trailblazing alumni, taking the methodologies and best practices you perfected at our coding bootcamp to your next job. We've built world class software engineering curriculum and programming courses. However, CodeGurukul is, above all else, a world-class learning environment.

Course Overview

JavaScript is the most ubiquitous programming language in history. It's in every browser and now it's even being used on servers. This is one of the fastest growing areas of software development. Almost weekly, innovation is being made.

The Fresher to Hacker will train students to build web applications. Users don't want to download a native iOS or Android app to take care of day to day activities on the web; they want highly-interactive websites. This has caused a boom in interest amongst companies looking to build client-side (read: mobile-friendly) web-apps that consume a JSON API rather than rely on kilobyte-heavy server-side rendering. The JavaScript landscape is changing almost weekly, with new libraries and techniques released by both major companies and independent, open-source developers. The result? Developers who understand emerging best practices are able to put up fully-featured and scalable apps in less time.

Prerequisites

- Code School
  - JavaScript Roadtrip Part 1 and Part 2
  - Try jQuery
  - CSS Cross Country
- Chrome DevTools

Ideal Student Background

The Fresher to Hacker is intense and the material is complex. Because of the stringent prerequisites (which are completed online), you'll be working on advanced JavaScript concepts from day one, and building a client side application by week three and four. If you have a solid understanding of jQuery already and are ready to level up to application-grade JS, this is the course for you.

Before entering this development accelerator, students must demonstrate competency with:

- HTML
  - Tags
  - Attributes
- CSS
  - Selectors
  - Properties & values
  - Box model
  - Basics of twitter bootstrap or other grid system
- Control structures in JS
  - Variables
  - Conditionals
  - Loops
  - Functions
- jQuery
  - Selectors
  - DOM manipulation

With preferably years of software experience on a different stack as well.

Course Content

- Bash
- Version control with Git
- Developer tools with Chrome
- Data structures
  - Stack
  - Queue
  - Linked List
  - Binary Search Tree
  - Hash Table
  - Arrays
- Algorithms
  - Merge Sort
  - QuickSort
  - Map/Reduce
- Git- Source Version Control
  - Exploring the history of version control
  - Installing Git on Mac, Windows, and Linux
  - Initializing a repository
  - Writing useful commit messages
  - Understanding the Git three-tree architecture

- Tracking when files are added, edited, deleted, or moved
- Viewing change sets and comparing versions
- Undoing changes and rolling back to previous versions
- Ignoring changes to select files
- Creating and working with code branches
- Merging branches and resolving merge conflicts
- Stashing changes for later
- Working with hosted repositories and remote branches
- Developing an effective collaboration workflow
- Functional JS with UnderscoreJS / Lo-Dash
- Object Oriented JavaScript (prototypal inheritance)
- Objects
- Build
  - Bower
  - Grunt & grunt-contrib
  - Require/Browserify
  - npm
  - jslint
- Client-side MVC (BackboneJS)
- Client-side templating (Underscore & Handlebars)
- Working with third party JavaScript APIs
- Async vs promises
- HTTP & REST
- NodeJS
  - Streams
  - Bufers
  - fs
  - Package management
- Express & Connect
- MongoDB
- AngularJs
  - What is AngularJS?
  - Working with complex models
  - Using a the $http service to read a JSON file
  - Binding data
  - Dividing your app into partials
  - Creating a details template
  - Using AngularJS animation event
- Amazon Web Services
  - The benefits of cloud architecture
  - Core cloud-based architectural principles

- o Monitoring resources and applications with CloudWatch
- o Using Amazon Machine Image (AMI)
- o Autoscaling
- o Using Elastic Beanstalk
- o Implementing message queues, Simple Workflow Service, and Simple Notification Services
- o Setting up security groups
- o Launching and connecting to an EC2 instance
- o Elastic Load Balancing
- o Virtual Private Cloud (VPC)
- o Using the AWS SDK
- Cloud Storage
  - o Why use cloud storage?
  - o Granting access to Amazon S3 buckets
  - o Displaying bucket contents
  - o Downloading files immediately
  - o Creating a Dropbox application
  - o Finding, downloading, and uploading files

Required Material

- Laptop preferred (BSD or Linux is also accepted)
- JavaScript Web Applications by Alex MacCaw. Published by O'Reilly. ISBN: 978-1-449-30351-8
- Testable JavaScript by Mark Ethan Trostler. Published by O'Reilly. ISBN: 978-1-449-32339-4

Resources

- Books:
  - o JS: The Good Parts by Douglas Crockford
  - o Secrets of the JavaScript Ninja by Job Resig and Bear Bibeault
  - o JavaScript Enlightenment by Code Lindley
  - o JavaScript Pocket Reference by David Flanagan
  - o HTML5 and JavaScript Web Apps by Wesley Hales
  - o JavaScript: The Definitive Guide, 6th Edition by David Flanagan
- Articles
  - o JavaScript Style Guide
  - o JavaScript Playground
  - o Express JS Getting Started Guide
  - o VowsJS
- Videos
  - o O'Reilly Webcast: How to Build a Chatroom in JavaScript in Under an Hour

- o   Node.js: A Jumpstart for Devs
- o   NodeSchool

Course Guarantee

The course guarantees full time jobs to all alumni within two months after course competition or 100% cash back with a job at a partner company in the fourth month after the course.

Rules and Duration

- All candidates must attend all program days without fail.
- All project assignments have to be completed and submitted on time.
- The course runs from 9am to 9pm , 7 days a week and for two months with 4 days holiday per month