

## MAXIMUM CODING BOOTCAMP

### PROGRAM OBJECTIVE

Teach individuals who may have little or no programming experience how to become an entry-level, front- and back-end software developer and be placed in a related job through this 13-week immersion bootcamp.

### PROGRAM PREREQUISITES

- Meet with MAX's agent to discuss your career;
- Take the applicable aptitude test;
- Complete all required paperwork by date defined by agent;
- Basic Computer Knowledge
- Typing Test
- Computer Basic
- Windows Essentials
- File Management

### PROGRAM LENGTH

Program is thirteen (13) weeks in length, Monday through Friday, 9:00 AM – 4:30 PM with a one-hour lunchbreak daily.

### PROGRAM COURSES

MODULE TITLE	TOTAL COURSE HOURS	CLASS HOURS	LAB HOURS
Git/GitHub	6.5	4.0	2.5
SQL Server	32.5	19.5	13.0
C#.Net & Java	160.5	96.5	64.0
EF/MVC/WebAPI	19.5	12.0	7.5
Spring Framework	19.5	12.0	7.5
Scrum	14.0	8.0	6.0
Hosting	13.0	8.0	5.0
HTML/CSS/Bootstrap/jQuery	13.0	8.0	5.0
JavaScript	19.5	12.0	7.5
Angular / Typescript	45.5	27.0	18.5
Capstone Project	46.0	28.0	18.0
Career Services and Preparation	32.5	19.5	13.0
<b>TOTAL HOURS:</b>	<b>422.0</b>	<b>254.5</b>	<b>167.5</b>

**INDUSTRY JOB TITLES:**

- Quality Assurance
- Computer Programmer
- Web Developer
- Software Developer
- Database Administrator

**COURSE DESCRIPTIONS**

**GIT/GITHUB** - In this module, the student will learn the basics of source control management and how it is accomplished in a distributed environment.

**SQL SERVER** - The student will learn and practice the SQL Statements that every developer needs to retrieve and update data in a SQL Database; design databases like a DBA and implement them with SQL scripts using SQL Server Management Studio or the MySQL Workbench; gain professional skills such as using views, stored procedures, and functions.

**C# .NET & JAVA** - In this module, the student will learn the foundational concepts of programming. The student will learn how to use Visual Studio, C#, Entity Framework and the .NET library classes to develop Windows web applications along with Eclipse, Java, Hibernate, Spring and the Java library classes to develop Java web applications. How to use C# and Java to communicate to SQL databases directly. How to use objectoriented programming to correctly use business classes, encapsulation, inheritance, polymorphism, and composition along with interfaces the way they are productively used in the real world. At the end of the topics for these general-purpose languages, the students will do their capstone in both technologies.

**EF/MVC/WEBAPI** - The student will be introduced to the MVC design pattern; how to start an ASP.NET application; how to use controllers, models, and WebApi to communicate in JSON. This module introduces EntityFramework Core, an Objectrelational mapping tools to SQL Server. The module includes using LINQ to provide easy access to creating, modifying and reading SQL Databases.

**SPRING FRAMEWORK** - The student will be introduced to the Spring Framework, specifically Spring Web. The students will build RESTful web services, coupled with Spring Data JPA, to return JSON responses utilized by the Angular front end. Students will also utilize Maven for project builds. For Hibernate we discuss entities, the annotations needed to map those entities to database tables and discuss Hibernate which is ORM library which sits atop JPA.

**SCRUM** - Scrum Framework – Students dive into the Scrum software development framework including, roles and responsibilities, principles, artifacts, and events and time boxes, rules and customs.

**HOSTING** - The hosting topic reviews the multiple facets required to host a .NET application in the cloud. It includes:

- Managing remote hosting via control panel
- Creating and maintaining databases in the cloud
- Operating and maintaining IIS web services
- Web Applications versus Virtual Directories

**HTML/CSS/BOOTSTRAP/JQUERY** - The student will learn to build HTML pages with text, links, images, tables and forms plus use style sheets (CSS) along with Bootstrap for colors, backgrounds, formatting text and page layout.

**JAVASCRIPT** - In this module, the student will learn JavaScript the way it is most commonly used today – with the latest tools and most up-to-date techniques to start creating dynamic web apps. The student will also learn how to work effectively with JavaScript frameworks, functions and modern browsers plus how to use the most effective coding practices using HTML5.

**ANGULAR/TYPESCRIPT** - The student will learn the current version of Angular and Typescript to build Single-page applications (SPA) that access JSON services. The application will create services to make the AJAX calls that provide data that is data-bound to the user interface.

**CAREER SERVICES AND PREPARATION** - StrengthsFinder 2.0, Emotional Intelligence in the Workplace, Resume Preparation, Technical Interviewing and Acing the Behavioral Interview.

**CAPSTONE PROJECT** -The Boot Camp Capstone project is a comprehensive software development project that each student is required to complete and get certified in order to graduate from the boot camp. This Project is a professional-level, full-stack, web application with an enterprise-level SQL database. It includes an object-oriented middle layer exposing by RESTful Web Services, and an Angular Single Page Application (SPA) web interface. Each student creates this project individually throughout the bootcamp writing every line of code themselves while working in and out of the classroom. Students will likely work 80 to 120 hours on this project and will leave the boot camp with this full stack application as evidence of the foundational development skills they've learned.