

## Sample Apprenticeship Posting: Junior Coder

### What Will You Do:

Summary of the role and activities

With the direction of a Developer, Junior Coders create and modify general computer applications or specialized programs. You will gather user needs to develop software solutions and maintain those programs.

- Maintain software applications or websites using core coding languages and tools
- Coordinate with other developers to identify the goals, limits, required capabilities, performance requirements, and users for a given project.
- Modify existing software to correct errors, adapt it to new hardware, or improve its performance. Write, design, or edit web page content.
- Work effectively with others to complete work, hit milestones or targets, resolve conflicts and work effectively.

### Who You Are:

Preferring mindsets and interests

- **Team player:** Open communicators that want to help get things done and gather as much information as possible.
- **Learner:** You like learning new things and understanding the “how” behind what makes software and computer applications work.
- **Technical Mindset:** Technology does not have to be life, but it helps if you want to learn about and work with it. Some basic familiarity with the use of computers, hardware, and peripheral devices.

### What You Have Done:

Educational Requirements for Applying Candidates

Applicants should be able to communicate clearly and concisely, both verbally and in writing.

Applicants should also be on track to master the following arithmetic competencies by the beginning of the apprenticeship in order to access potential college-level training content (as outlined in College Board Accuplacer Program Manual, October 2016):

- Can perform the basic arithmetic operations of addition, subtraction, multiplication, and division using whole numbers, fractions, decimals, and mixed numbers
- Can make conversions among fractions, decimals, and percentages

### What You Will Learn:

Occupational Competencies the apprentice will develop in the role

- **Basic Web Development:** commonly-used web development languages including AJAX, XML, HTML 5, CSS, and JavaScript.
- **General Database:** SQL basics (e.g., selecting, inserting, updating, deleting records), at least one database management application, and database fundamentals such as normalization, schemas, etc.
- **Core Coding Languages:** simple front-end, back-end, and/or mobile software with core coding languages (Java, C#, JavaScript); integrating data storage libraries, methods, interfaces, and objects; using debugging techniques.
- **Networking Tools and Concepts:** Basic ability to apply commonly-used networking tools/devices (e.g., routers, Ethernet, firewalls, frame relay, LAN, VPN, and WAN) and network security techniques and tools (e.g., encryption technology, wireless support, cloud services, and proxy servers).
- **Microsoft Office:** Demonstrated use of multiple end-user software packages and cloud solutions (which must include a business productivity suite such as MS Office or Google Docs) and working knowledge of how to install, configure, and maintain some of these packages in an enterprise environment

#### Foundational Competencies the apprentice will develop in the role

- **Programming:** Writing computer programs that build toward goals, staying within pre-defined requirements, and meeting quality expectations; ideally, understanding how given programs create value for business and end-users.
- **Critical Thinking:** Using logic and reasoning
- **Critical Thinking:** Using logic and reasoning to identify the risks and rewards of alternative solutions, conclusions, or approaches to problems to improve operational efficiency; seeing the big picture and identifying patterns like a large number of tickets for the same type of issue; identifying opportunities for improvement by regularly reevaluating the status quo.
- **Coordination:** Adjusting actions in relation to others' actions; able to improve overall team performance and consider broader impact of individual decisions; aware of overall team goals and context; writes code that can be read and maintained by others.

### Apprenticeship Certifications

- This apprenticeship will include a minimum of 2 college courses