Welcome to the Java Software Engineering Spec Trial Day

Introduction to the Java Specialization

Background

Java was originally released in 1995 and still holds a spot as one of the most popular programming languages. It is based on the C family of programming languages. A few of the main tenets of the Java language are that it aims to be an easy-to-use object oriented language, allows the same program to be executable on different operating systems, and that it has copmuter network support built in. These qualities - and many more - make Java a popular choice in enterprise application development.

Apps that use Java

- Google & Android OS
- Spotify
- Twitter
- CashApp
- Netflix
- LinkedIn
- Uber
- Amazon

Introduction to Specializations

During Specializations, you will take a huge step towards your career in tech by not only attaining skills in a particular technology area or stack, but also by getting accustomed to a new work style that resembles the way you will work and learn in your first job. Your coding bootcamp experience is technically over, and now you will begin your journey within the technology industry.

Throughout your career as a Java Engineer, you will need to continue to learn and gain new skills. Developers will do this by carefully researching new technologies, following online video tutorials, and practicing learned concepts. We designed the Specializations program to mimic that learning experience. To do this, we've leveraged a combination of video learning and carefully curated exercises. We also provide support through multiple avenues including: daily stand-ups with your Tech Lead, weekly review sessions, weekly one-on-one meetings with your Subject Matter Expert (SME), and queue support during your class hours.

While this new learning environment will help prepare you for your first role and continued learning, it will also present unique challenges for you to conquer. Some of these challenges include: time management, self-awareness, and video fatigue. Overcoming these challenges at Devmountain, while you have support, will help build the foundation for your growth as an engineer.

What You Will Learn

This course prepares students with the knowledge and skills to start a career as a Java Software Engineer, providing all requisite knowledge of full stack web development, computer science, and modern programming practices.

In this course, you will learn about the following technologies:

- Git & Github
- Java
- SQL
- JDBC Library
- SpringBoot Web Framework
- Computer Science Algorithms and Data Structures

Staff During Specializations

Tech leads provide guidance, industry knowledge, and leadership during Specializations. They are the primary leader throughout the day for students and ensure that students are progressing with the support that they need. Tech Leads manage 1-2 technical programs and communicate directly with Subject Matter Experts to escalate student questions. They run daily Scrum Meetings, check in with students frequently, and monitor student progress. They also help to maintain and update curriculum for their area(s).

Fun Fact: The role of the tech lead is modeled after the Team Lead in the tech industry. A Team Lead is traditionally someone who is both an individual contributor but also coordinating with team members and tracking and driving overall progress. While Team Leads are proactive in their communication, it's also important for the rest of the team to be proactive in keeping the Team Lead up to date on blockers, progress, and other general information. Tech leads do this and that…

Subject Matter Experts answer student questions and provide feedback to students on their comprehension of the material during weekly meetings. You can expect at minimum one hour of one-on-one time with a SME each week during specialization, in addition to any escalated questions you have the SMEs might answer either individually or with the group based on collaboration with the Tech Lead.

Fun Fact: The SME role is modeled after Senior Engineers and SMEs (same name) within the tech industry. In a real engineering org, SMEs and Senior Engineers are called upon to enable mid or junior level folks when they run into blockers. As part of Specializations, you have the oppportunity to work with real Subject Matter Experts with years of experience in the tech industry. Not only will you learn things from them, you will also learn how to advocate for yourself effectively. Working with SMEs on a less frequent basis than staff during Foundations will enable you to build independence and confidence that will be invaluable when you begin your first role within the tech industry.

Your Java Team

Below are some of the amazing staff that you'll be working with during Specs!

Robert Davis - Java Tech Lead

- Get to Know Robert: *"I like to play video games, and I have a 8 year-old pure-bred Yellow Lab named Honey."*
- Advice from Robert: *"No question is a dumb question."*
- Favorite thing about work: *"The students' willingness to learn"*
- View Linkedin

Michael Gao - Java Subject Matter Expert

- 17 years experience with Java
- Currently **Java Software Developer at USPTO**

Christian Wong - Java Subject Matter Expert

- 7 years experience with Java
- Currently **Software Engineer at Memoro**
- View Linkedin

Hesham Hussain - Java Subject Matter Expert

- 7 years experience with Java
- Currently **Software Development Engineer II at Amazon Web Services**
- View Linkedin

Trial

Structure

1. Watch content on Udemy to familiarize yourself with the basics of Java.
2. Complete the drills and mini-project file.
3. Reflect on your experience.

Watch

The course you'll be watching selections from during this trial is organized into modules. Each of those modules contains multiple videos. Below are links to the modules along with the names of the video clips you are assigned to watch. **You do not need to watch the entire module or course**, only the video clips in the provided path.

Click here to watch the course.

You'll be working in a Repl for this project. Make sure that you have an account on replit.com and that you're signed in. If you'd like to code along, create a new repl using the Java template. You could also take notes in your repl as you watch these videos.

> **Note: Downloading Java**
>
> If you choose the Java Spec, you'll download Java and a new IDE to your computer at the beginning of the spec. If you are interested in doing that today, talk with your instructor.

Project Setup

1. Head to this link
2. Click the "Fork repl" button (in the upper right usually)

Overview

In this Java exercise, you'll be completing problems that should seem familiar to you. They are designed to mimic how you got started with JavaScript at the beginning of Foundations. After these basic problems, you'll have a few tasks to complete that will finish the code for a command line calculator app. All of your problems and tasks are in the ***Main.java*** file.

Notice the structure of the file and how it differs from JavaScript. What keywords and formatting do you recognize from the video? Can you figure out what the provided code is supposed to do? Once you've got the lay of the land, start on the instructions below.

Instructions

1. Follow the commented out instructions throughout the file
2. Don't forget to Google if you are having trouble with something
3. You can click the "Run" button at the top of the screen to run your code

> ***Note: Compiling***
>
> *Remember that Java will need to compile before it runs, so don't worry if it takes a little longer to run. It should still only be a few seconds.*

4. In a personal document, write down some of your thoughts on Java.

- What did you like about Java? What didn't you like?
- What would pursuing Java look like for you?

Solution

Download the solution here (this is the same solution from the link on Frodo's home page or exercises page)

Congrats!

Nice work! You've completed the Java Spec Trial Day. You should now have a better understanding of what Java is all about and if it's the specialization that you'd like to pursue. If you have questions, please reach out to the Java Tech Lead.