

Java

Below, the Java topics for Java Ramp Up are described. The Ramp up process is administrated using the [Java Trello Board](#)

Java Ramp Up				
Category	Topic	Hours	Resources	Challenge Type
			Link	
Java Basics (week 1)	Object Oriented Concepts	4	Lesson: Object-Oriented Programming Concepts	Algorithm Challenge
	Class and Objects (Inheritance, Composition, access modifiers)	4	Lesson: Classes and Objects	
	Types	4	Lesson: Language Basics	
	Generics	8	Lesson: Generics (Updated)	
	Annotations	8	Lesson: Annotations	
	Collections API	8	Trail: Collections	
Java Advanced (week 2)	Lambda Expressions	8	Lambda Expressions	Data processing Challenge
	Streams and Lazy Evaluation	8	Processing Data with Java SE 8 Streams, Part 1	
	Concurrency (Threads)	8	Lesson: Concurrency	
	Concurrency (Completable Futures)	8	Java 8: Definitive Guide to CompletableFuture	
Java Ecosystem (week 3)	Spring Core Framework	8	Introduction to the Spring Framework	API Challenge
	Spring MVC	4	Serving Web Content with Spring MVC	
	Spring Test	4	Spring Framework: Part IV. Testing	
	JPA (Hibernate)	8	Accessing Data with JPA	
	Junit - Mockito	8	Unit tests with Mockito - Tutorial, Unit Testing with JUnit - Tutorial	
	Databases	8	MySQL Tutorial Mongo Tutorial	
Design Principles (week 4)	SOLID	8	Bob Martin SOLID Principles of Object Oriented and Agile Design	
			SOLID Design Patterns	
	GoF Patterns	12	Twenty years of Design Patterns g f patterns Factory Method Pattern Abstract Factory Pattern Singleton Pattern Observer Pattern Strategy Pattern	
	Functional Programming (Immutability, Pure Functions, Referential Transparency)	12	Functional Programming from First Principles	