Bootcamp Syllabus

Full-Stack Java Web Developer Bootcamp (6 Mths)

Week 1:

HTML/CSS
What is HTML?
Popular HTML Tags
Basic HTML Layout Inputs, Forms,
Buttons
Importing Scripts
What is CSS?
Classes
Inline Style vs Style Tag vs External
File
Margin
Padding
Div keyword

Assignment #1

Weeks 2 & 3:

Setup and Java Basics
Setting up your GitHub account
Access to Private Slack Channel
Access to Video Lesson Library
Installing JDK or STS (IntelliJ)

Java Basics
Primitive Types
Data Types
IF statement
IF else statement
IF, ELSE IF, ELSE statement
= vs == vs .equals()
& vs &&
| vs ||
Console Input/Output
For Loops
i++ vs ++i
While Loops
Methods
What is an Object?
Constructors
Assignment #2

Week 4:

Core Java and File I/O
Access Modifiers
Static Keyword
String Manipulation
Getters and Setters
POJOs
Services
Arrays
String Helpers
For Each Loop
Exceptions
Files I/O

Assignment #3

Week 5:

Important Object Concepts
Inheritance
Polymorphism
Overriding
Overloading
Protected Keyword
Casting
Wrapper Classes
Writing to Files

Week 6:

More Important Object Concepts
Interfaces
Abstract Classes and Methods
Sorting (Comparator)
Sorting (Comparable)
RegEx

Assignment #4

Week 7:

Collections and Java 8
Lists Sets
HashMap
Lambdas
Streams
Java 8 Collecting Stream Data
(.collect)
Multi-Threading with Streams Java 8
Filters
Java 8 Mapping

Assignment #5

Week 8:

Java 8 Continued
Optional Keyword Default Keyword
for Interfaces
Enums

Date and Time
Calendar
java.util.Date vs java.util.LocalDate
java.util.Time vs java.util.LocalTIme

Assignment #6

Week 9:

Unit Testing
What is Unit Testing?
What is Test Driven?
Development Unit Testing Examples
Annotations
Generics
Reflection

Assignment #7

Week 10:

Multi-Threading
What is Multi-Threading?
Running a Task
Understanding Asynchronous
Programming
Leveraging Executors
CashedThreadPool
Futures in Java
Completable Futures in Java
Thread Safety with Multi-Threading

Assignment #8

Week 11:

Spring Framework
 Inversion of Control
Autowiring on fields
Autowiring in constructors
Components
Application context @configuration
@componenScan
@value
@scope singleton vs prototype
@qualifier
@profile

Assignment #9

Week 12:

REST and JSON
JSON
HTTP Requests (GET, POST,PUT, DELETE)
HTTP Parameters and Body
Rest Template
ResponseEntity
@PathVariable
@RequestParam

Assignment #10

Week 13:

Spring MVC
Controllers
RequestEntity Model
Views with Thymeleaf

Assignment #11

Week 14:

Maven
Dependency Management
POM group / artifact / version
<dependencies>

MySQL DB (Part 1)
Tables
Rows
Keys
Relationship between tables Foreign
Key
Select
One-to-Many

Week 15:

MySQL DB (Part 2)
Many-to-Many
One-to-One
Select with Join
Select IN
Grouping Data

Assignment #12

Week 16:

ORM Hibernate (Part 1)
What is an ORM?
JPA vs. Hibernate
Why we're focusing on
Spring-Data-Jpa
@Entity
@OneToMany
@OneToOne
@ManyToMany

Week 17:

ORM Hibernate (Part 2)
JpaRepository (show CRUD functionality)
Query Methods (findBy)
Query Methods (Between)
+ More Query Methods

Assignment #13

Week 18:

Spring Security
What is Spring Security?
Getting Started
Setup Spring Security
Adding Login Page
Encoding your Passwords
Creating a User Details
Service Implementing User
Details Testing User
Details Service
Let's Talk Databases
What is Cross Site Request Forgery?
How to Log Out
@AuthenticationPrincipal
Annotation @Secured
Annotation

Week 19:

JavaScript (Part 1)
Static vs. Dynamic
Typing Variables in JS
Arrays
Objects
DOM
Fetch() API
Promises
Query Selector
AddEventListener

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Week 20:

JavaScript (Part 2)
Creating another Registration Page
Adding a Unique Constraint on a
Username
Handling a Fetched Response
Finding Existing Users Logic
Callbacks
Promises and the Let Keyword
QuerySelectorAll and FontAwesome
Async and Await

React Course (Optional)

Assignment #14

Week 21-24:

Development Project
Develop your own application with
everything you've learned and add it
to your portfolio

Workshop Courses Bundle
(See our real-world apps are
developed)

Java Interview Preparation Course
Resume Writing Course

Certificate of Completion