Curriculum

Module 1: Everyone Can Code

- **Getting Started**
  - Compiling and executing Java Programs
  - Variable and Data Types
  - Arithmetic and Relational Operators
  - Conditional Statement -if

- Generating Sequences
  - Looping Statement -while
  - Looping Statement - do while
  - Looping Statement - for

- Comparing and Organizing
  - Conditional Statement - If else
  - Conditional Statement - If else ladder
  - Conditional Statement - Nested If
  - Conditional Statement - Switch case

- Patterns and Structures
  - Break and Continue statements
  - Nested Loops

- Modularizing Programs
  - Introduction to Methods
  - Different forms of Methods
  - Procedural programs using static method
  - Introduction to Arrays
  - for-each Loop

- String Manipulation
  - Introduction to Strings
  - String Comparison method
  - String Conversion method
  - String Searching method
  - String Spilt method
  - String Substring method

Module 2: Core Java

- Working with Objects
  - 'class' keyword
  - Constructors
  - Access Modifiers

- Generalization and Specialization
  - 'abstract' keyword
  - 'super' keyword

- Managing Multiple Objects
  - Collection Hierarchy
  - List
  - Set
  - Map

- Reading and Writing Data
  - IO Hierarchy
  - Read and Write Binary
  - Read and Write Objects
  - Read and Write Characters

Module 3: SQL

- Processing Single Table
  - Selecting Rows
  - Filtering Rows
  - Limiting Rows
  - Aggregate Functions

- Ordering and Grouping Results
  - Ordering Results
  - Grouping Results
  - Filtering Groups

- Processing Multiple Tables
  - Equi Join
  - Outer Join
  - Independent Sub-queries
  - Correlated Sub-queries
  - Derived Tables

- Defining a Database in SQL
  - Creating Tables
  - Altering Tables

Module 4: Weaving the Web

- Creating Static Web Page
  - Designing Layout
  - Registration Form
- Creating Interactive Web Page
  - Color Paragraphs
  - Form validations
  - Image Slider
  - Add Row To Table
  - Sort Table Data

- Getting Started with Bootstrap
  - Design a Responsive Web Page
  - Design Hello World Web Page
  - Rich User Interface Widgets

Module 5: Enterprise Web Development

- Developing Servlets
  - Introduction to Servlet
  - Developing Web Apps using Servlets
  - Session Management
  - Servlet Context and Config
  - Servlet Filters

- Developing JSPs
  - Introduction to JSP
  - Developing JSP Pages
  - JSTL

- Working with MVC and JDBC
  - JDBC Crud Operations
  - Introduction to MVC
  - Integrating Web Applications with Database

Module 6: Angular

- Introduction to Angular
- Installation
- Creating first Angular App
- Application Resources
- Angular Components
- Angular Data Binding
- Angular Pipes
- Angular Forms
- Angular Directives
- Dependency Injections

Module 7: Spring Boot

- Introduction to Sprint Boot
- REST APIs
- Spring JPA
- Spring Boot with REST services
- Spring Boot with Angular

Capstone Project: Develop a fully functional web application (replica of e-commerce app) and deploy on AWS.