EPAM COE Training Curriculum

Module 01 - Version Control Systems & Build Automation tool

|  |  |  |
| --- | --- | --- |
| **S.No** | **Lesson** | **Learning Objectives** |
| 1. | Version Control with GIT | The Need of Version Control Systems, Type of Repositories → Centralized Vs Distributed, Branches, Check in, Checkout. Conflict, Merge, Tags, Reverting changes, Basics of Branching strategy |
| 2. | Maven | * Features of Maven, Objectives' of Maven   , maven life cycle   * Providing guidelines for best practices development |

Module 02 - Core Java

|  |  |  |
| --- | --- | --- |
| **S.No** | **Lesson** | **Learning Objectives** |
| 1. | Java Platform and Fundamentals  ,OOP's  ,Collections | * JDK, JRE, JVM, Memory (Heap, Stack) * Object, Class, Inheritance, Polymorphic, Abstraction, Encapsulation, Difference between Abstract and Interface   Constructor rules in inheritance, Access modifiers in the inheritance chain   * The problem with Arrays   Why should you need collection Collection Framework overview Sorting, Searching, Iterating, Differences in various interfaces and implementations Hashcode/Comparator/Comparable Collection with Iteration order : Lists  Collection with Uniqueness : Sets Collection with Modification order  : Stacks, Queues, Deques Collection with Pairs : Maps |
| 2. | Java Annotations and Generics | * Understanding annotation and creating custom annotation * Usage of Generics |

|  |  |  |
| --- | --- | --- |
| 3. | Java 8 - Lambdas & Functional Interfaces, Streams, Optionals and DateTime |  |
| 4. | Logging & Log4J | Understanding of Logging and working with Log4J |
| 5. | XML | Understanding of XML elements and Schema |

Module 03 - Advanced Java

|  |  |  |
| --- | --- | --- |
| **S.No** | **Lesson** | **Learning Objectives** |
| 1 | JPA/Hibernate | Working with Java Persistence API to connect to databases using Hibernate |
| 2. | Multi- Threading | Understanding of Multi- Threading |
| 3. | Concurrency, Executors framework and ForkJoin pool | Understanding of Executors framework |
| 4. | JavaScript Object Notation | Understanding and Implementation of JSON |

Module 04 - Spring Framework

|  |  |  |
| --- | --- | --- |
| **S.No** | **Lesson** | **Learning Objectives** |
| 1. | Introduction to Spring Core |  |
| 2. | Spring Boot |  |
| 3. | Spring MVC |  |
| 4. | Spring Data |  |

|  |  |  |
| --- | --- | --- |
| 5. | REST  Architecture & Maturity Model | Understanding of REST Architecture and Richardson Maturity Model |
| 6. | Spring REST |  |