Java

STANDARD EDITION (6M) (PART-1)

#CodingMtlbVMM

HISTORY & INTRODUCTION

Introduction to the history and evolution of Java .Compilation Process & Understanding Java Virtual Machine Environment

OPERATORS & BASIC OPERATIONS

Tokens , Data Types, Variables, Working with operators, Math Class, Primitive and Reference Datatypes, Type Conversion

FLOW OF CONTROL

Controls statements including if-else, switch case, loops, etc

DATA STORAGE IN JAVA

Working with Single & Multi Dimensional Arrays String, String Buffer & String Builder, String Tokenizer

WORKING WITH STRINGS

Concept of Immutable and Mutable Strings. String, StringBuffer & StringBuilder. Use of StringTokenizer

OBJECT ORIENTED-1

Understanding Concept of classes, Objects, methods, message passing and static members, working with anonymous static block, constructors and Temporary Instance

OBJECT ORIENTED-2

Inheritance and interface , private interface methods, Anonymous Inner Class , Polymorphism and packages , Exception Handling

COLLECTION CLASSES

Working with Date , Calendar & Object Classes, List , Set , Map . Queue and Array List. Auto boxing with collections and generic Types

DATABASE CONNECTIVITY

Working with MYSQL , Creating Connection with the database. performing CRUD, JDBC with GUI

FEATURES OF LATEST JAVA VERSION

VERSION CONTROL WITH GIT

Understanding concept of Git & importance of version control , working with core git commands clone, commit, push, pull , branch and merge

Java Full Stack Development
(Advance Java) #CodingMtlbVMM

WEB FUNDAMENTALS

Concept of Web Application. Difference Static and Dynamic Pages

HTML 5.0 & CSS

Creating HTML Document, Type of Tags. Using CSS to Style and Design Web Pages. Using BootStrap Framework for making web Pages Responsive

JAVA SCRIPT

Java scripts functions and then using selector to access various DOM and creating effects using javascript.

SERVLETS & JSP

Understanding servlet life cycle, understanding HTTP Request and Response, Generating Dynamic HTML Content using Servlets. Working with Forms,

USING JDBC IN WEB APP

Using JDBC to fetch and use data from MySQL , using CRUD operations in Web APP.

AJAX & REST API

Fetching Data using AJAX from Server and Creating REST API to generate JSON. Parsing and using JSON Data retrieved via AJAX request.

DOCKER ESSENTIALS: IMAGES, CONTAINERS & COMPOSE

VERSION CONTROL WITH GIT

GENERATIVE AI

Understanding LLMs (OpenAI, Gemini) integration

Building text generation, chatbots, image generation, summarisation, & content automation.

AGENTIC AI (AI AGENTS)

Designing autonomous AI agents that can plan, reason, and execute tasks

Integrating agents for customer support, task automation, and personalized user experiences.

SPRING BOOT FRAMEWORK

- Introduction to spring Boot and understanding Boot Initializer
- Using static content
- Concept of Controllers, generating dynamic content
- Handling GET and POST Requests
- Generating JSON data and creating REST API for client side consumption
- Concept of Dependency Injection
- Implementing business logics in Service Layer
- Defining Data Access layer Using Repository
- Using Http Sessions
- Using Spring Security
- Using ThymeLeaf for Templates
- JPA and ORM