



CERTIFICATE IN FULL-STACK DEVELOPMENT- JAVA

DURATION: 240 Hours

TOTAL CREDITS: 8

COURSE SYLLABUS

Objective

The **Certificate in Full-Stack Development-Java** course teaches the candidate the core concepts of both the front-end and back-end programming. This course helps students, programmers and developers to build dynamic, rich web sites and web applications using compiled language like JAVA.

Exit Profile

- Complete Knowledge in developing applications using JAVA.
- Capable to write both front-end and back-end code.
- Expertise in RDBMS Concepts and database Programming using MySQL.

Career Path

- JAVA Full-Stack Developer
- Frontend developer
- UI Designer

Course Outline

Course Name:	CERTIFICATE IN FULL-STACK DEVELOPMENT - Java	Duration:	240 H
Module	Topic	Dur.	Total Dur.
MODULE- 1	Introduction to UI/UX designing	6 H	120 H
	HTML	18 H	
	CSS	18 H	
	JavaScript	30 H	
	JQuery	30 H	
	Bootstrap	18 H	
MODULE -2	Core Java Programming	30 H	120 H
	RDBMS -My SQL Server	30 H	
	JDBC	12 H	
	Servlets	12 H	
	JSP	12 H	
	Spring Frameworks	6 H	
	Hibernate	6 H	
	Introduction to Cloud Computing, GIT & GITHUB	12 H	

Course in Detail

MODULE-1

INTRODUCTION TO UI/UX DESIGNING

- HTML
- CSS
- JavaScript
- JQuery
- Bootstrap
- Core Java Programming
- RDBMS -My SQL Server
- JDBC
- Servlets
- JSP
- Spring Frameworks
- Hibernate
- Introduction to Cloud Computing, GIT & GITHUB

HTML

- Introduction
- Building Blocks of Web Frontend
- Introduction To HTML
- Basic HTML TAGS
- Advanced HTML Tags & concepts.

CSS

- Introduction to CSS
- CSS Basics
- CSS Advanced

JAVASCRIPT

- Introduction to DHTML
- Javascript Basics
- Javascript Advanced
- Document Object Model
- Manipulating DOM using JS
- DOM Events

JQUERY

- JQuery Basics
 - What is JQuery?
 - Adding JQuery to a web page
 - JQuery Syntax
 - JQuery Selector
 - JQuery Events
- JQuery Advanced
 - HTML Manipulations
 - Effects
 - Traversing
 - Plugins

BOOTSTRAP

- What is Bootstrap?
- Adding bootstrap to your projects.
- Different predefined Element styles
- The Grid System
- Forms
- Templates

MODULE-2

CORE JAVA PROGRAMMING

- IDE Tools– Eclipse (Installing & Features)
- Overview
- Features of JAVA
- Programming Structures in Java
- Arrays
- Strings
- Collection Types
- Wrapper classes
- Utility Classes
- OOPS Features
- Exceptions
- Multithreading

RDBMS -MYSQL SERVER

- SQL RDBMS Concepts
- SQL Data Types
- SQL Syntax
- SQL Operators
- SQL Joins
- Views
- Triggers, Cursors
- Stored Procedure
- SQL Date Functions
- SQL Useful Functions
- SQL Sub Queries

JDBC

- JDBC drivers
- Advantages of JDBC
- Environment Setup
- Connectivity with MySQL using JDBC

SERVLETS

- Introduction to Web servers
- Introduction to Servlets
- Environment Setup
- Servlet API
- Servlet Request & Response
- Servlet Collaboration
- Database Operations using Servlets

JSP (JAVA SERVER PAGES)

- Introduction Web servers & Servlets
- Environment Setup
- Life Cycle
- Working with servlets
- Servlet Forms
- Writing Filters
- Exceptions
- Cookies Handling
- Session Tracking
- Database Access

SPRING

- Spring Core
- Spring MVC
- Spring Data JPA
- Gradle

HIBERNATE

- About Hibernate framework
- Advantage
- Architecture
- Web application using hibernate using XML
- Hibernate log4j
- Inheritance mapping
- Hibernate mapping
- Hibernate caching
- Integration with hibernate and spring
- Hibernate life cycle

INTRODUCTION TO CLOUD COMPUTING, GIT & GITHUB

- What is cloud computing?
- Working of cloud Computing
- Advantages of Cloud Computing
- What is Git and Gitlab?
- Installing Git
- Git File Management
- Branching
- Pull Requests
- Common Workflows