



IDM TECHPARK

GUIDE'S FOR PERFECT CAREER PATHWAY



Java Full Stack Course Syllabus



N.S.D.C.
National
Skill Development
Corporation



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About Us

IDMTECHPARK global retail & corporate training solutions provider in Coimbatore, Erode, Trichy & Salem that offers a comprehensive range of training and placement services for both fresher's and professionals seeking new opportunities. The company commenced its IT training business in 2016. A pioneer in IT education, over the years, we have trained over 50k students. Idmtechpark has a wide range of courses, maintains education standards & provides placement assistance.

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About IDMTECHpark Education Quality

IDMTECHPARK is managed and developed by industry specialists with more than 8 years of expertise in the field. IDMTECHPARK offers a staff of highly skilled professional trainers who deliver effective IT training in a friendly setting, concentrating on the needs of each individual to help them succeed in a demanding work world. In the book of career and success, our staff never leaves a page unturned.

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IDMTECHPARK's versatile instructor-led training class rooms and lower-class sizes enable people to engage more easily and absorb knowledge, resulting in remarkable results for both themselves and the organizations for which they work. Our training programmes are adaptable and customizable to ensure that each participant gets the most out of their time with us. IDMTECHPARK focuses in providing hands-on IT training in over 30 different courses.

- We teach in-demand courses
- We provide impactful learning material
- Our teachers are well-selected & trained
- We follow world-class teaching methods
- Our courses include E-Projects
- We conduct technical workshops
- Exams are held and based on Exams providing Certification
- Certificates are recognized the world over
- Our course timings are flexible



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Our Recent Placement

Idmtechpark assists students in getting job placements on successful completion of their courses. Idmtechpark also provides recruitment assistance to organizations. Idmtechpark students are shortlisted based on the organization's requirement. To make students job-ready, Idmtechpark conducts workshops e.g. How to do Group Discussions, how to behave in a Personal Interview. From time to time, job fairs & campus recruitments are conducted. Workplace skills such as time management, making effective presentations and communication skills are also provided. All this helps students find appropriate jobs in the IT industry while also helping save companies recruitment costs.

Krishnaveni M

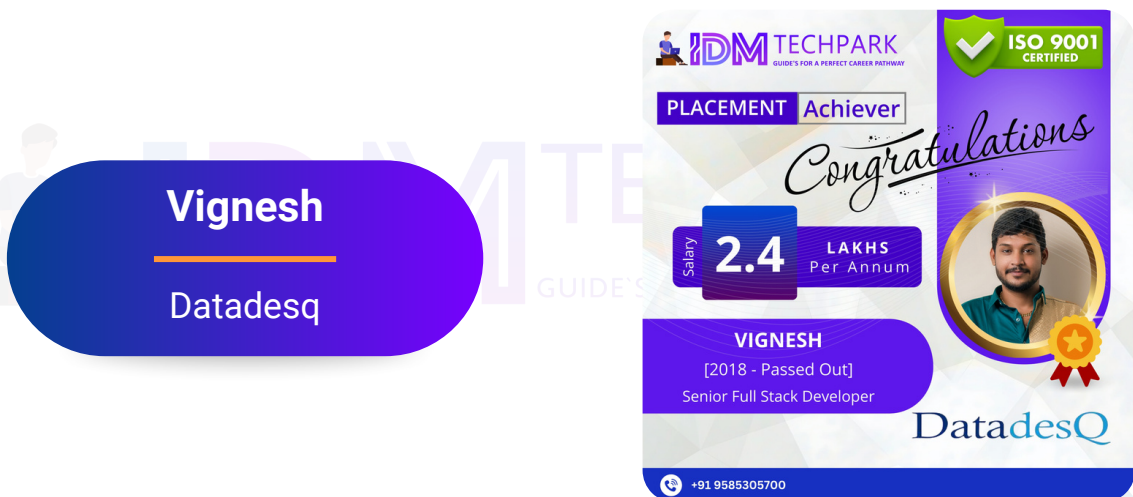
Frutterlabs





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Datadesq



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Accenture

Keerthana

AJS



Brindha Boopathi

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Kavın Kumar

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Surya

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Pavithra

Vel Info Tech



Poovitha

Gray Matter



Ramesh

TDT

Siva Sankar
ST Cloudspark tech



Nabeel Hisham
VTail

Kalayarasan
Violet Infotech



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Our Alumni Working At



MODULE 1

Web Development Basics

- What is Full Stack?
- Frontend vs Backend
- HTTP, DNS, Hosting Concepts
- Browser Rendering & Developer Tools

MODULE 2

HTML5 Fundamentals

- HTML Tags & Elements
- Forms & Validation
- Tables, Lists, Media Tags
- Semantic HTML

MODULE 3

CSS3 & Styling

- Box Model
- Flexbox, Grid Layout
- Transitions, Animations
- Media Queries (Responsive Design)

MODULE 4

JavaScript Essentials

- Variables, Operators, Data Types
- Functions, Loops, Conditionals
- DOM Manipulation
- Events & Event Listeners

MODULE 5

Modern JavaScript + ES6

- Let/Const, Arrow Functions
- Spread/Rest, Destructuring
- Promises, Async/Await
- Fetch API & JSON

MODULE 6

Frontend Framework – React.js / Angular

- Components, Props, State
- Routing (React Router / Angular Router)
- Hooks / Lifecycle
- Forms & Validations

MODULE 7

Version Control with Git & GitHub

- Git Basics (clone, push, pull, commit)
- Branching & Merging
- GitHub Workflows & Issues
- Collaborating with Teams

MODULE 8

Java Core Concepts

- Data Types, Operators
- Classes, Objects, Inheritance
- Encapsulation, Abstraction, Polymorphism
- Exception Handling

MODULE 9

Java Collections Framework

- List, Set, Map Interfaces
- ArrayList, LinkedList, HashMap, HashSet
- Iterators, Streams

MODULE 10

Java 8+ Features

- Lambda Expressions
- Functional Interfaces
- Streams API
- Optional, Method References

MODULE 11

JDBC (Java Database Connectivity)

- Connecting to MySQL/PostgreSQL
- CRUD Operations
- PreparedStatements
- Handling Transactions

MODULE 12

Servlets and JSP

- HTTPServlets, doGet/doPost
- Web.xml Configurations
- JSP Tags, JSTL, EL
- MVC Architecture

MODULE 13

Spring Framework Fundamentals

- Spring IoC & Dependency Injection
- Bean Lifecycle
- Spring Annotations
- Java-based Configuration

MODULE 14

Spring Boot Essentials

- Spring Boot Setup
- Starters, Auto-Configuration
- Spring Boot Annotations
- Running Embedded Servers

MODULE 15

RESTful Web Services

- REST Principles
- @RestController, @GetMapping, @PostMapping
- RequestParam vs PathVariable
- Consuming REST APIs

MODULE 16

Data Access with Spring JPA & Hibernate

- Spring Data JPA Basics
- Entity Mapping, Repositories
- Relationships (OneToMany, ManyToOne)
- Custom Queries (JPQL/Native)

MODULE 17

Security – Spring Security

- User Authentication & Authorization
- In-Memory & Database-based Authentication
- JWT (JSON Web Tokens)
- Role-based Access Control

MODULE 18

Integration of Frontend with Backend

- REST API Integration with React/Angular
- Axios / HttpClient usage
- CORS Policy Setup
- Environment Configurations

MODULE 19

Validation & Exception Handling

- Bean Validation (Hibernate Validator)
- Global Exception Handling (@ControllerAdvice)
- Custom Exceptions
- Field-Level Error Messages

MODULE 20

Unit Testing

- JUnit 5
- Mockito for Mocking Services
- Spring Boot Test
- Testing REST Controllers

MODULE 21

Build Tools – Maven & Gradle

- pom.xml & dependencies
- Lifecycle Phases
- Plugins & Goals
- Creating Executable JAR/WAR files

MODULE 22

Deployment & DevOps

- WAR/JAR Deployment (Tomcat, Spring Boot CLI)
- CI/CD with GitHub Actions
- Docker for Java Applications
- Hosting on Heroku, AWS, or Render
- CSRF & XSS protection

MODULE 23

Database Design & Performance

- SQL Joins, Indexing, Normalization
- Writing Complex Queries
- Connection Pooling
- Query Optimization

MODULE 24

Real-Time Features (Optional)

- WebSockets with Spring Boot
- Chat or Notification System
- STOMP over WebSockets
- Frontend Integration with Socket.io

MODULE 25

Capstone Project + Career Preparation

- Full Stack Project (e.g., E-commerce, Blog, CRM)
- Resume Building for Java Full Stack Roles
- Mock Interviews
- GitHub Project Portfolio Setup

Thank You

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