Diploma in Java

Job-Oriented Courses

POWERED BY 3RI TECHNOLOGIES

STEP: Software Training Employability Programme

www.3ritechnologies.com

About Us

3RI is an Advanced Technology Education Platform providing advanced and professional training in latest technologies that helps freshers and professionals rise to the advanced skills requirements of the current industry.

Powered by 3RI Technologies, these classroom training sessions are industry oriented courses on Python, Angular, Java, Web Development & Software Testing by top class faculty who has more than 7+ years of experience in the same domain.

The curriculum is designed by industry experts, who has real time scenario based exercise and case studies and projects using database from companies like Walmart, Amazon, Google, etc.

This training is supported with teaching assistance which allows individuals to develop hands.

Company Highlights

www.3ritechnologies.com

INDEX

01. Faculty

02. Subject & Tracks

03. Curriculum

04. Placement Support

05. FAQ's

06. Who We Are?

07. Coordinates

3RI Technologies

www.3ritechnologies.com

3RI Technologies

FACULTY

Our Top-class faculty are experienced working professionals working in senior positions of top-tier companies like Infosys, TechMahindra, TCS, Cognizant, Google, Microsoft, etc.

www.3ritechnologies.com

SUBJECTS & TRACKS

What Makes 3RI Different ?

3RI Curriculum is based on real time industry approach, they are short and practical oriented to learn the concepts in fast pace with implementation skills.

STEP in Java

3RI Technologies

BASIC FOUNDATION

C,C++, OOPs Concepts, N/W, OS, DBMS, etc.

BACK END TECHNOLOGY

Core Java, Adv Java - JDBC, JSP, Servlets, Spring & Hibernate

UI DEVELOPMENT

HTML, CSS, JavaScript, Bootstrap, Ajax, JQuery

SOFT SKILLS / APTITUDE

Logical Reasoning & Communication Skills Training

www.3ritechnologies.com

STEP in Java

BASIC FOUNDATION

1. **Programming Basics**
   - Fundamentals of Computer
   - Understanding Applications Using Windows Explorer & File Structure
   - Number Systems
   - Application Software
2. **Operating System & Networking**
   - Need for operating system
   - Functions of Operating System
   - Process Management
   - Memory Management
   - File Management
   - Device Management
   - Types of operating system
   - TCP/IP fundamentals

3. **C Language**
   - Introduction to C
   - Keywords, Constants and Variables
   - Data Types in C
   - Operator and Expressions
   - Control Structure
   - Functions
   - Pointers
   - Arrays
   - Structure
   - String Handling
   - Preprocessor Directives
   - File Management in C
   - Dynamic Memory Allocation
4. **Object Oriented Concepts using C++**
   - Introduction to OOPs
   - Beginning with C++
   - Class, Objects Basics
   - Constructor, Data Members
   - Operator Overloading
   - Inheritance
   - Polymorphism
   - Overriding
5. **Linux Foundations**
   - Introduction to UNIX and its flavours
   - UNIX architecture
   - File System
   - User and Group Policies
   - Unix general commands
   - Concept of Files and Directories in Unix
   - File Permission and related commands
   - Filter Commands and their options
   - Vi Editor

www.3ritechnologies.com

STEP in Java

3RI Technologies

6.Introduction to Database Management Systems

- Introduction to Database
- DBMS, RDBMS, ORDBMS
- DDL, DML, DCL, TCL
- Data types
- SELECT Statement
- Restricting and Sorting Data
- Aggregating Data using Group Functions
- Manipulating Data
- Sub queries
- Important Functions
- Joins and different types

UI DEVELOPMENT

1.Front-End Introduction

- What are website and web application?
- What is the difference between the local server and web server
- Client-server architecture

2.HTML

- Introduction and Basic Structure of HTML
- Paragraphs, Headings and Text Formatting Tags
- Html list
- Html links
- Html Images
- Html table
- Html4 & 5 form elements

3.CSS

- Introduction of CSS
- Types of CSS
- Basic CSS properties
- CSS Box Model
- Division Structure (Overview of how to create a webpage)
- CSS Position

4.Javascript

- Introduction of Javascript
- How to display output in JS
- JS Variables &Datatypes
- JS Operators
- JS Conditional Statements & Looping Statements
- JS Functions

www.3ritechnologies.com

STEP in Java

- Pre-defined Functions
- User-defined functions
- HTML Events
- JS Validations

5.Bootstrap

- What is Bootstrap?
- Bootstrap Setup
- Bootstrap grids
- Bootstrap buttons, forms, navigation bars

CORE JAVA

1.Introduction to Java

- History of Java
- Features of Java

2. Overview of Java

- OOP's Concept
- Data types and Variables
- Control Structures
- Strings, Arrays

3. Objects and Classes

- Object, Classes and Methods
- Method Overloading
- Constructors
- Object class

4. Inheritance

- Types of Inheritance
- Method Overriding
- Dynamic method dispatch

5.Packages and Interfaces

- Defining Packages
- Extending Interfaces

6. Exception Handling

- Fundamentals of Exception Handling
- Exception types
- Try and Catch and finally
- Throw, throws
- Custom Exception

7. Inner Class and Wrapper classes

- Inner Classes
- Static Nested Classes
- Wrapper Classes
- Anonymous Inner Classes

8. String Handling

- Creating Strings
- String handling methods
- String Buffer and String Builder

www.3ritechnologies.com

STEP in Java

9.Input and Output in Java

- Byte streams & Character streams
- File Serialization

10.Collections Framework

- Collection Interfaces and Classes
- Iterators
- Comparators

11.Multithreading

- Basics of java thread
- The Thread Scheduler
- Naming a thread, Daemon thread
- Perform single /multiple tasks by multiple threads
- Major Thread Concepts
- Garbage Collection

12.Reflection API

- Overview of Reflection
- Use of newInstance() method and determining the class Object
- Accessing a private method or member from outside the class

13.Lambda Built-in Functional Interfaces

- Use primitive versions of functional Interface
- java.util.function package
- Use binary versions of functional Interface
- Use the UnaryOperator Interface

J2EE

1.Java Swing

- Swing Introduction
- Swing Controls
- Swing Event classes
- Event Listeners
- Event Adapters
- LayoutsManagers

2.JDBC

- Common JDBC components
- Steps to connect to the database using MySQL and Oracle database
- Types of JDBC statements – statements, preparedStatement, and callable statement
- Transactions management in JDBC
- CRUD operation using preparedStatement

www.3ritechnologies.com

STEP in Java

3RI Technologies

3.SERVLET

- Servlet – environment setup
- Servlet onfig and ServletContext parameters
- Servlet life cycle
- Servlet Attribute And Servlet Parameters
- Exploring Deployment Descriptor
- Session Tracking In Servlet
- Servlet Filter
- Types Of Filter
- Servlet Filter Mapping In Web.Xml
- Servlet-listener
- Various Servlet Listener
- Servlet Listener Configuration
- Servlet-security
- Details about MVC architecture
- Practical exposure on MVC using JSP and Servlet

4.JSP

- JSP – Overview
- JSP – Life Cycle
- JSP API
- SP-Scripting Elements
- JSP- Directive Elements
- Types Of JSP Scopes
- JSP – Custom Tags
- JSP-Implicit Objects
- JSP – Standard Tag Library (JSTL)
- JSP – Expression Language (EL)
- JSP – Exception Handling

SPRING

- Introduction To Spring Framework
- Spring-Environment Setup
- Steps To Use Spring Framework In Applications
- Understanding IOC And Dependency Injection
- Working with Bean Factory and Application Context
- Bean Definition
- Working with multiple configuration files
- Most popular namespaces e.g. beans,
- Best practices when working with namespaces
- Advanced XML Dependency Injection
- Externalizing constant values into properties files

www.3ritechnologies.com

STEP in Java

- Bean Scopes and Bean Life Cycle
- Bean Post Processors
- Bean Definition Inheritance
- Dependency Injection
- Injecting Inner Beans
- Injecting Collection Type
- Annotation-Based Dependency Injection
- Autowiring and component scanning
- Annotation Based Configuration (@Required, @Autowired,@Qualifier)
- JSR-250 Annotations (@Resource, @PostConstruct, @PreDestroy)
- Component and Stereotype Annotations
- Using MessageSource To Get Text From Property Files

2.Aspect-Oriented Programming (AOP)

- Introduction on Spring AOP
- Aspect-oriented programming concepts
- Integration with Spring IoC
- Defining pointcut expressions
- Implementing an advice: @Around, @Before, @After, and so on
- AspectJ APIs and annotations

3.Data Access and JDBC with Spring

- Introduction to Spring JDBC
- How Spring integrates with existing data access technologies
- Spring JDBC APIs
- Spring JDBC development
- Data Access Exception hierarchy
- Result transformations
- Implementing Row Mapper
- Parameter mapping
- Named Parameter JDBC Template

4.Transactions management in Spring

- Spring Declarative Transactions Management
- Spring Programmatic transaction management

5.Hibernate with Spring

6.Working with Spring MVC

- Introduction to Spring MVC framework
- Creating many Spring MVC Web Applications

STEP in Java

- Writing an annotation-based controller class- @Controller,@RequestMapping
- @PathVariable annotation
- Handling an HTML form using @RequestParam annotation
- Understanding @ModelAttribute Annotation
- Data Binding with Date, Collection
- Data Binding with a User-Defined Type, BindingResult
- @InitBinder annotation, WebDataBinder, CustomDateEditor
- Writing your own custom property editor class
- Form Validations
- Form Validation (customizing error
- messages using Spring MessageSource)

HIBERNATE

1. Overview of Hibernate
2. Hibernate-environment setup
3. Object-relational mapping (ORM)
4. Features of Hibernate
5. Using JPA and Hibernate annotations
6. Hibernate object states(Transient, Persistent and Detached Objects)
7. CRUD operation in Hibernate
8. Annotation
9. Hibernate Mapping XML Configuration
10. Hibernate Caching
11. Transactions management in Hibernate
12. BLOB Object

PROJECTS & ASSIGNMENTS

- **Daily Assignments and hands-on Topics covered.**
- **Interview Questions, Resume Formation and Interview Tips.**

www.3ritechnologies.com

STEP in Java

SOFT SKILLS

1.Self Analysis
- Know yourself
- Personality types
- Areas of interest

2.Self Discovery
- SWOT Analysis – strength, weakness, opportunities, threats

3.Goal Setting
- Short-term plan
- Long-term plan
- Effective Time-management

4.Effective Self Presentation
- Personal grooming, Dressing, Hygiene

5.Effective Communication
- Verbal – Language
- Voice modulation - Tone, Pitch
- Clarity of Speech
- Listening skills – Active Listening, Selective Listening
- Written communication – general business correspondence

6.Email Etiquette

7.Body Language
- Understanding non-verbal communication
- Postures, Gestures, Eye contact

8.Tips to prepare impressive Resume

9.Tips for Group Discussion

10.Handling Telephonic interview

11.Mock – Technical interview

12.Mock – Personal Interview (PI)

13.Office Etiquettes and Mannerisms

STEP in Java

APTITUDE

1.Quantitative Aptitude

- Number Systems
- LCM and HCF
- Percentages
- Profit, Loss, and Discount
- Interest (Simple and Compound)
- Speed, Time and Distance
- Ratio and Proportion
- Probability
- Permutation & Combination
- Time and Work
- Heights and Distances

2.Logical Reasoning

- Number and Letter Series
- Calendars
- Clocks
- Logical Sequence
- Blood Relations
- 3.Algebra
- Linear Equations
- Quadratic Equations
- Higher Degree Equations

Placement Support

Placement at Our Client's Location

Interview Preparartion

Resume Workshop by Experts

Real World Application Integration in Resume

Exclusive Sessions from Experts

Don't Forget!

www.3ritechnologies.com

3RI Technologies

FAQ's

- **Do I need to purchase any Software ?**

  No, we provide necessary installation guides of the software required.

- **What are the specific System Requirements ?**

  8GB RAM, 500GB Hard disk (i3 Processor).

- **What are Projects ?**

  Projects are real world datasets from companies like Nike, Yelp,Amazon, Netflix etc. that are provided to our students.

3RI Technologies

Who We Are

The Presenters

VIJAY SIR

Java Expert

SUNAYANA MA'AM

Java Developer

KRISHNA MA'AM

UI Developer

www.3ritechnologies.com

Contact Us

MAILING ADDRESS

3RI Technologies Pimple Saudagar
405 & 403, Rainbow Plaza, Pimple Saudagar, Pune - 411027

3RI Technologies Deccan
"DurgaShankar", Shubham Hotel Lane,Deccan, Pune - 411004

EMAIL ADDRESS

info@3ritechnologies.com

PHONE NUMBER

+91 830 810 3366 / +91 20 4630 2591

+91 866 965 3366 / +91 20 2551 1177

Have any questions or suggestions?

www.3ritechnologies.com