

CORE JAVA

BASIC TO ADVANCED

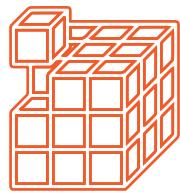
Learn CORE Java, Foundation for Advanced Java, and Related Technologies



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What is Core JAVA?

Core Java refers to the fundamental components of the Java programming language that form the base for all Java development. It encompasses:



Basic Syntax and Structure

Includes Java's syntax, variables, data types, operators, loops, and conditional statements.



Object-Oriented Programming

Covers classes, objects, inheritance, polymorphism, encapsulation, and abstraction.



Java Standard Library

Utilizes core libraries like `java.lang`, `java.util`, `java.io` for input/output operations, collections, and exception handling.



Platform Independence

Java programs can run on any device with a Java Virtual Machine (JVM), ensuring cross-platform compatibility.



Basic APIs

Includes networking, concurrency (threads), GUI development (Swing, AWT), and database connectivity (JDBC).



Foundational Knowledge

Core Java forms the foundational knowledge required for developing Java applications across various domains. It helps lay the groundwork for more specialized Java development paths such as enterprise Java development, web development with frameworks like Servlets and JSP, and more.

Difference Between CORE Java & Advanced Java

Core Java refers to the fundamental components of the Java programming language that form the base for all Java development. It encompasses:

CORE JAVA

Basic syntax, data types, control structures

Object-Oriented Programming concepts

Standard Libraries like `java.lang`, `java.util`

Threads, exceptions, generics

Platform Independence

Basic APIs like IO, collections, networking

Desktop apps, basic web applications

Foundational knowledge for Java developers

ADVANCED JAVA

Servlets, JSP, JDBC

Java EE, Spring Framework

Additional Libraries like Struts, Hibernate

EJB, JMS, JMX

Scalability and Performance Tools

Advanced web technology MVC architecture

Enterprise-level applications, web services

Specialized tools for specific development needs

How Does Core Java Propel Your Career Growth?



Foundation for Advancement

It serves as a stepping-stone to Advanced Java and related technologies, providing essential knowledge before advancing further.

Industry Demand

Java is indispensable across various industries, ensuring your skills are consistently in demand.

Scalable

Java's scalability allows applications to handle increasing demands and data volumes effectively.

Global Use

It serves as a stepping-stone to Advanced Java and related technologies, providing essential knowledge before advancing further.

Community Support

A robust community provides resources, frameworks, and updates, facilitating continuous learning and development.

Versatile and Essential

Core Java is fundamental for developing general-purpose applications, making it indispensable in almost every sector.

Career Stability

Mastering Core Java enhances career stability and offers opportunities for growth in the ever-evolving tech industry.

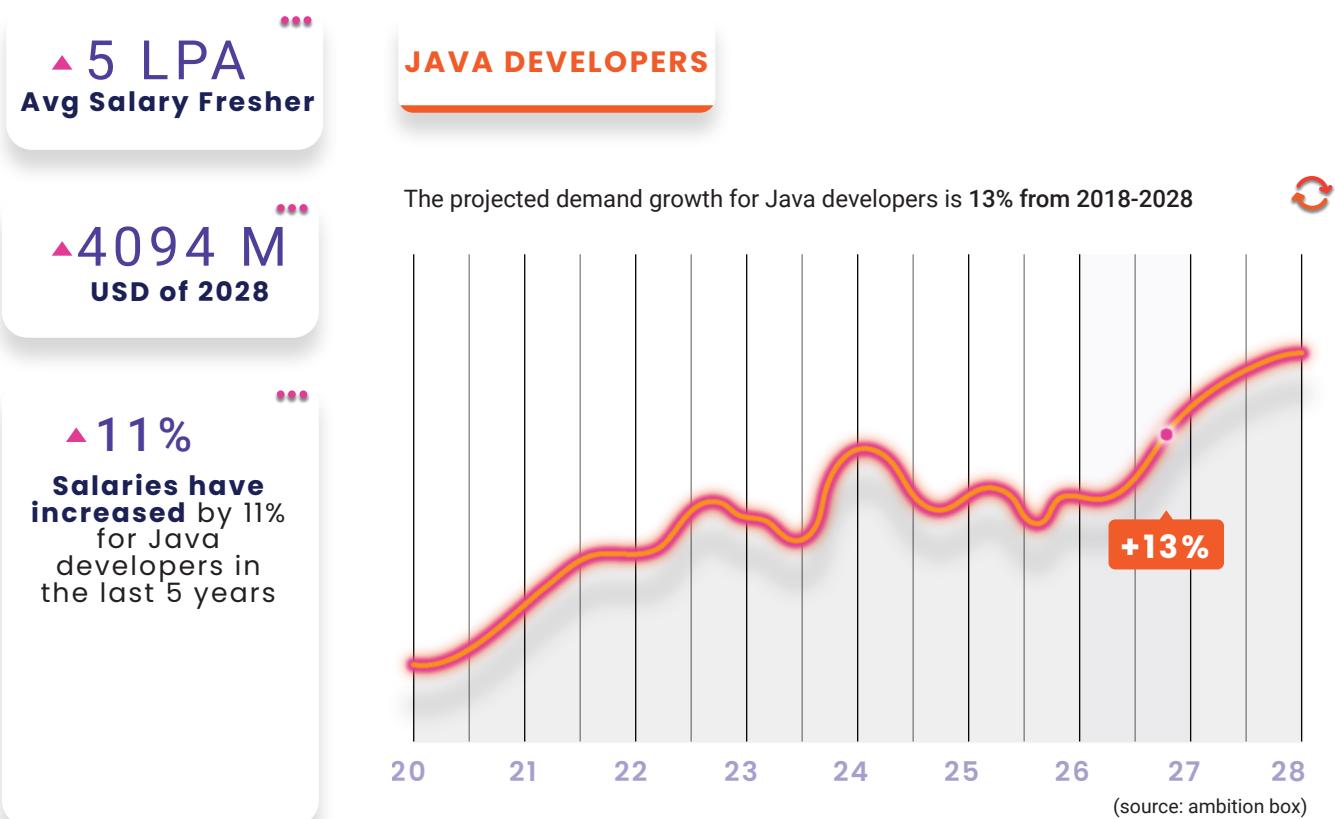
Secure

Built-in security features in Java frameworks ensure robust protection against vulnerabilities and threats.

JAVA Job Market

Top Global organizations like Amazon, Google, Microsoft, Uber Technologies Inc., Capgemini, Cognizant Technology Solutions, HCLTech, and Netflix, among other big players need candidates with strong CORE Java skills. Attractive pay packages (INR 4.7 to INR 6 LPA), job opportunities and salary packages are available for the right candidate with the right skills.

For someone who wishes to pursue a career in software development, Core Java is the most important aspect to be learned, as being specialized in a domain will equip you in your career path with your set of tools.



What Does This Mean for You?



Growing demand for Java developers.



Competitive salaries with upward trends.



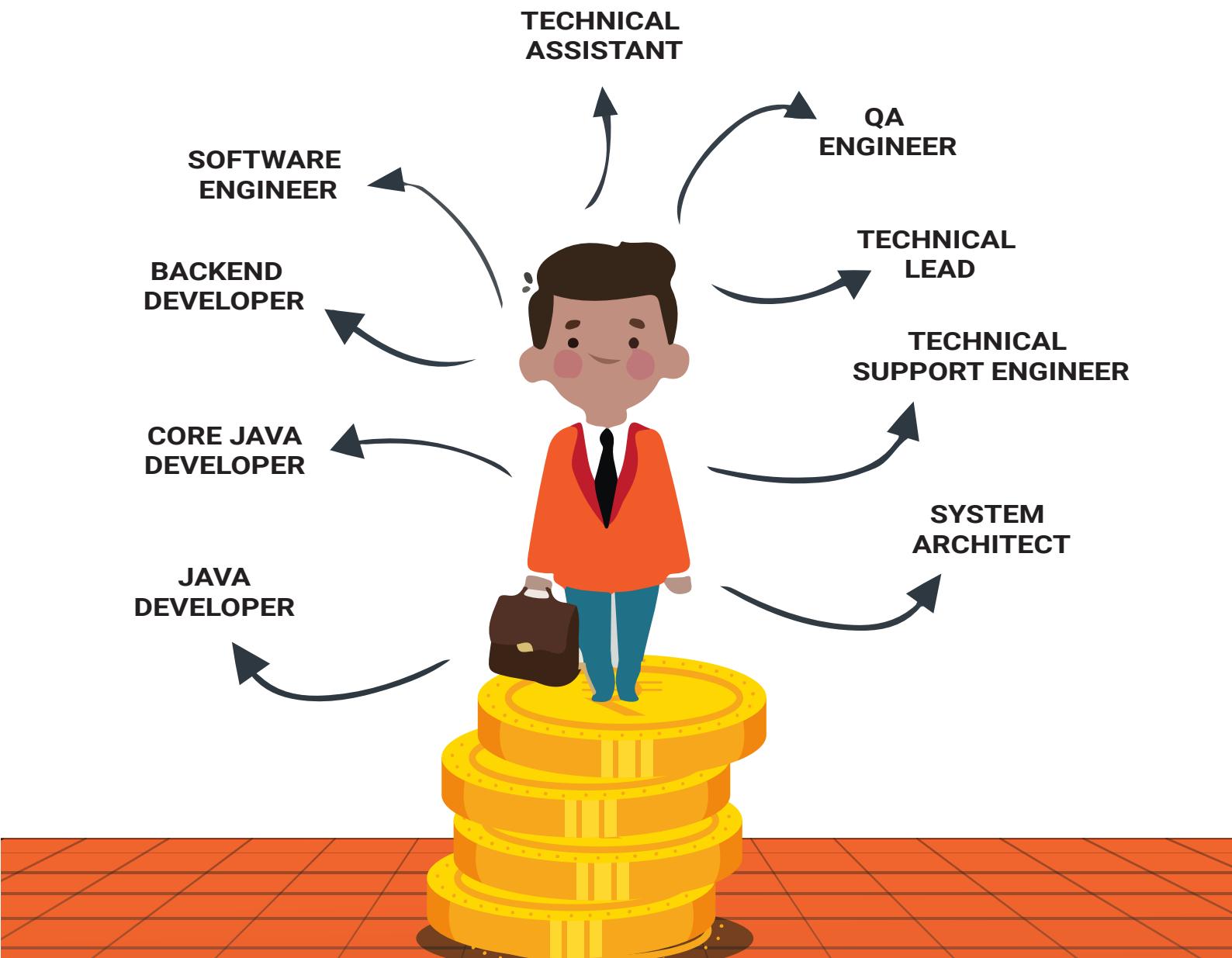
Stable career prospects with growth opportunities.



Valued skills across diverse sectors.

Future Opportunities For You

Post Completion of your program, you can apply for the following roles:



Who Should Do This Course?



Beginners

Individuals new to programming or Java specifically.

Students

Pursuing a career in software development or computer science.



Professionals

Seeking to solidify their foundational Java skills.

Aspiring Developers

Interested in learning object-oriented programming concepts.



Career Changers

Transitioning into software development or related fields.

Anyone

Looking to build a strong foundation in Java for various application development needs.



Course Timeline



Course Duration

8+ Weeks | 2 months



Sessions

60+ live tech Session

8 Value Added Sessions



Class Format

1.5 Hours per day

Online/Offline.



Interview Lineup

Unlock opportunities after certification with our exclusive Interview Lineup support. We'll connect you with tailored interviews to jumpstart your career journey.



Lifetime Career Support

Our commitment doesn't end at certification. Benefit from lifelong career support, guiding you through job switches and career advancements.

Modules That We'll Cover

An Overview of Java

- Introduction about Programming Language Paradigms.
- History of Java.
- WhyJava?
- JavaVersions.
- JavaDesigning Goal.
- Roleof Java Programmer in Industry.
- Features of Java Language.
- JavaCompiler, JDK Versions.
- JavaInstallation & Path Set.
- Difference between JDK, JRE and JVMJavaArchitecture.

- Arithmetic Operators
- Unary Operators
- Relational Operators
- Assignment Operators
- Equality Operators
- Logical Operators
- Bitwise Operators
- Operator Precedence
- Using Parentheses
- Separators
- TypeConversion and Casting
- Automatic Conversions

Introduction of Java Programming

- JavaProgram Development.
- JavaSource File Structure.
- Compilation & Execution using Editor.
- JavaBytecode.
- Analysis of Java Program

Control Structure & Looping Statements

- if else
- nested if else
- else if
- switch
- ternary ?:
- while
- for
- do-while
- Nested Loops
- Labeled Loops
- For-each Loop | Enhanced For Loop
- JumpStatements
- Method Definition
- Method Call
- Return Keyword
- Recursive Method Definition
- exit() method
- Methods of Math class
- RandomNumbers

Programming Fundamentals

- Keywords
- Identifiers
- Identifier naming rules
- Identifier naming conventions
- Integer Literals
- Floating-Point Literals
- Character Literals
- String Literals
- Boolean Literals
- DataTypes

Input in java

- Input from Scanner class
skip method
- Character Input
- Input from String
- Input from Console class

Classes & Objects

- Class Fundamentals
- Declaring Objects
- A Closer Look at new
- Assigning Object Reference Variables
- this Keyword
- Method Overloading
- Call by Value
- Random class
- Constructors
- Parameterized Constructors
- Overloading Constructors
- Instance Variable Hiding
- Initialize & declare
- Initialization block
- Instance member variable & method
- Static member variable & method
- Static block
- Static import
- Singleton class

Array in java

- What is Array and its advantages
- Types of Array
- Jagged Array
- One Dimensional Array
- Array Declare
- Input/Output
- Searching
- Sorting
- foreach loop
- Multi Dimensional Array
- UnevenArra

Array Topics

- Commandline arguments
- Passing array as an argument
- variable number of arguments
- Overloading Vararg Methods
- Varargs and Ambiguity
- JShell
- javadoc command

Inheritance & Abstraction

- Inheritance Basics
- A Superclass Variable Can Reference
- Using super
- Using super to Call Superclass
- Single Level Inheritance
- Multilevel Inheritance
- instance of operator
- Method Overriding
- final variable
- final Method
- final Class
- Binding
- Abstract Classes
- Visibility Modes
- `toString()` method
- native keywords
- Association & Dependency

OOPS Introduction And Basics

- What is OOPS?
- Necessity and Advantage of OOPS
- What is meant by class and object?
- Introduction of Abstraction, Encapsulation and Inheritance
- Polymorphism
- Introduction to Class and Objects

Polymorphism

- Polymorphism and its advantages
- Types of Polymorphism
- Types of Binding
- Method Overloading and its uses.
- Method Overriding and its uses.
- Difference between Overloading and Overriding
- About Class Casting
- About Design Patterns

Generics

- WhatAreGenerics?
- Generic Class
- Generic Class with Two Type Parameters
- Generic Method
- Generic Array Restrictions
- Comparable interface

Garbage Collection

- Garbage Collection
- finalize() Method

Inner Classes

- Simple Inner Class
- Static Inner Class
- Anonymous Class
- Local Method Inner Class

Interfaces

- Defining an Interface
- Implementing Interfaces
- Nested Interfaces
- Applying Interfaces
- Variables in Interfaces
- Multiple Inheritance
- Default Interface Methods
- Static Interface Methods
- Private default & static Interface Methods

Lambda Methods

- Introducing Lambda Expressions
- LambdaExpression Fundamentals
- Functional Interfaces
- SomeLambdaExpression Examples
- Block Lambda Expressions
- Generic Functional Interfaces

Packages

- predefined Packages
- user defined Packages
- Defining a Package
- Importing Packages
- CLASSPATH
- Access Protection

String Handling

- TheString Constructors
- String Length
- Special String Operations
- String Literals
- String Concatenation
- String Concatenation with Other Data
- Types
- Character Extraction
- charAt() getChars()
- getBytes()
- toCharArray()

Enum &strictfp

- enum keyword
- strictfp keyword

- String Comparison
- equals() and equalsIgnoreCase()
- regionMatches()
- startsWith() and endsWith()
- compareTo()
- Searching Strings
- Modifying a String
- substring()
- concat()
- replace()
- trim()
- DataConversion Using valueOf()
- Changing the Case of Characters Within a String
- Joining Strings
- StringBuffer
- StringBuffer Constructors
- length() and capacity()
- ensureCapacity()
- setLength()
- charAt() and setCharAt()
- getChars()
- append()
- insert()
- reverse()
- delete() and deleteCharAt()
- replace()
- StringBuilder
- StringTokenizer

Exception Handling

- Exception-Handling Fundamentals
- Exception Types
- Uncaught Exceptions
- Using try and catch
- Displaying a Description of an Excep..
- Multiple catch Clauses
- Nested try Statements
- throw
- throws
- finally
- Built-in Exceptions
- Chained Exceptions

Assertion & Wrapper Class

- Using assert keyword
- Assertion Enabling and Disabling Opti..
- TheNumeric Type Wrappers
- Character
- Boolean
- Autoboxing
- Autounboxing

Input/Output: Exploring java.io

- TheI/O Classes and Interfaces
- File class
- Creating Directories
- I/OExceptions
- TheStream Classes
- TheByte Streams
- InputStream
- OutputStream
- FileInputStream
- FileOutputStream
- SequenceInputStream
- PrintStream

Regular Expression

- Regular Expression Processing
- Pattern
- Matcher
- Regular Expression Syntax
- Demonstrating Pattern Matching
- TwoPattern-Matching Options

- DataOutputStream and DataInputStream
- RandomAccessFile
- TheCharacter Streams
- Reader
- Writer
- FileReader
- FileWriter
- BufferedReader
- BufferedWriter
- PushbackReader
- PrintWriter
- Serialization
- Serializable
- Externalizable
- ObjectOutputStream

Collections Framework

- Collections Overview
- TheFor-Each Style for Loop
- TheCollection Interface
- TheList Interface
- TheSet Interface
- TheCollection Classes
- Vector
- Stack
- ArrayList Class
- LinkedList Class
- HashSet Class
- LinkedHashSet Class
- TreeSet Class
- Using an Iterator
- Using an Enumeration
- Working with Maps
- Hashtable

Multithreading

- TheJavaThread Model
- TheThread Class and the Runnable In.
- TheMainThread
- Creating a Thread
- Implementing Runnable
- Extending Thread
- Creating Multiple Threads
- Using isAlive() and join()
- Thread Life Cycle
- Thread Priorities
- Synchronization
- Using Synchronized Methods
- TheSynchronized Statement
- Inter Thread Communication
- Deadlock
- Suspending, Resuming, and Stopping Threads
- Obtaining A Thread State
- DaemonThread
- volatile Thread

Date & Time

- Date
- Calendar
- Formatting Date and Time with java.te.
- DateFormat Class
- SimpleDateFormat Class
- TimeandDate Fundamentals
- Formatting Date and Time
- Parsing Date and Time Strings

Networking

- Basic terms in networking
- Socket Programming
- java.net package
- Socket Programming Examples
- DatagramSocket and DatagramPacket

MySQL Database

- Introduction
- Installation
- Connection
- Create Database
- DropDatabase
- Select Database
- DataTypes
- Create Tables
- DropTables
- Alter Tables
- Insert Query
- Select Query
- WhereClause
- Update Query
- Delete Query
- Like Operator
- Aggregate Functions
- AutoIncrement
- Default Values
- Sorting Results
- Primary Key
- Unique Key
- Foreign Key
- Using Join
- NULLValues
- Database Export
- Database Import

- SQLInjection
- ReadOnly ResultSet
- Updatable ResultSet
- Forward Only ResultSet
- Scrollable ResultSet

Projects (Web Application)

- banking Application
- QuizApplication

JDBC

- Introduction
- JdbcArchitecture
- Types of Drivers
- Statement
- ResultSet
- executeQuery()
- executeUpdate()
- execute()
- PreparedStatement

Projects (Web Application)

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Blogging Platform

Event Management System

The image is a screenshot of a travel website. At the top, there is a navigation bar with a logo on the left, followed by 'HOME', 'Your Cart', 'Favourites', and 'Your Orders'. On the right, there are icons for a user profile, a search bar, and 'LOGIN / SIGNUP'. Below the navigation, a large, stylized graphic of an airplane in flight is positioned next to a modern airport terminal building with a blue and white curved facade. The word 'AIRPORT' is written in large, bold letters on the building. The sky in the background is light blue with white clouds. In the foreground, there is a large, bold text overlay that reads 'Life Is Short And The World Is Wide!'. Below this main text, a smaller line of text says 'To get the best of your adventure you just need to leave and go where you like, we are waiting for you.' At the bottom left, there is a black button with the text 'Try For Free' in white. At the very bottom of the page, there are several filters and search fields: 'Round-trip', '1 Adult', 'Economy', 'Thokkurgao', 'Anywhere', 'Sun, Jan 9', 'Wed, Jan 12', 'Looking for Travel Ideas? Explore Map', and a search icon.

Travel Booking System

The dashboard displays various performance metrics and patient data across different departments.

HOSPITAL
MULTISPECIALTY HOSPITAL

Today appointments
301 (Total)
212 (New patients)
89 (Repeat patients)

Doctors list

- Dr. John Doe (MBBS,MD)
- Dr. Hannah (BDS,MDS)
- Dr. Neelash (MBBS,MDS)
- Dr. Elaina (BDS,MDS)

Availability of staff

Doctors	22
Nurse	48
Pharmacist	5
Laboratorist	8
Accountant	4
Diicians	2
Compounder	45

Available equipment

Wheel Chairs	5
Beds	12
Surgical Lights	2
Patient Monitors	7
Blanket and Fluid Warmers	25
Surgical Tables	2
Electrosurgical Units	4

Patients survey

Line chart showing survey results over time. The Y-axis represents 'Percentage' from 0 to 400. The X-axis represents 'Survey Period'.

Top 5 cases today

Donut chart showing the distribution of top 5 cases today. The categories are: Fever (20%), Cough (20%), Headache (20%), Vomiting (20%), and Diarrhoea (20%).

Visited patients age wise

Bar chart showing the number of visited patients by age group. The categories are: 0-10 (37), 11-20 (120), and 21-30 (144). A 'More Details' button is available for further information.

Health Management System

Purchase Orders											Production Jobs											Sales Orders											Stocktake Master											More											Create New										
Products											Search											Actions											Help											Settings																					
Search											Search											Reset											Create New Parent Category											Create New Product																					
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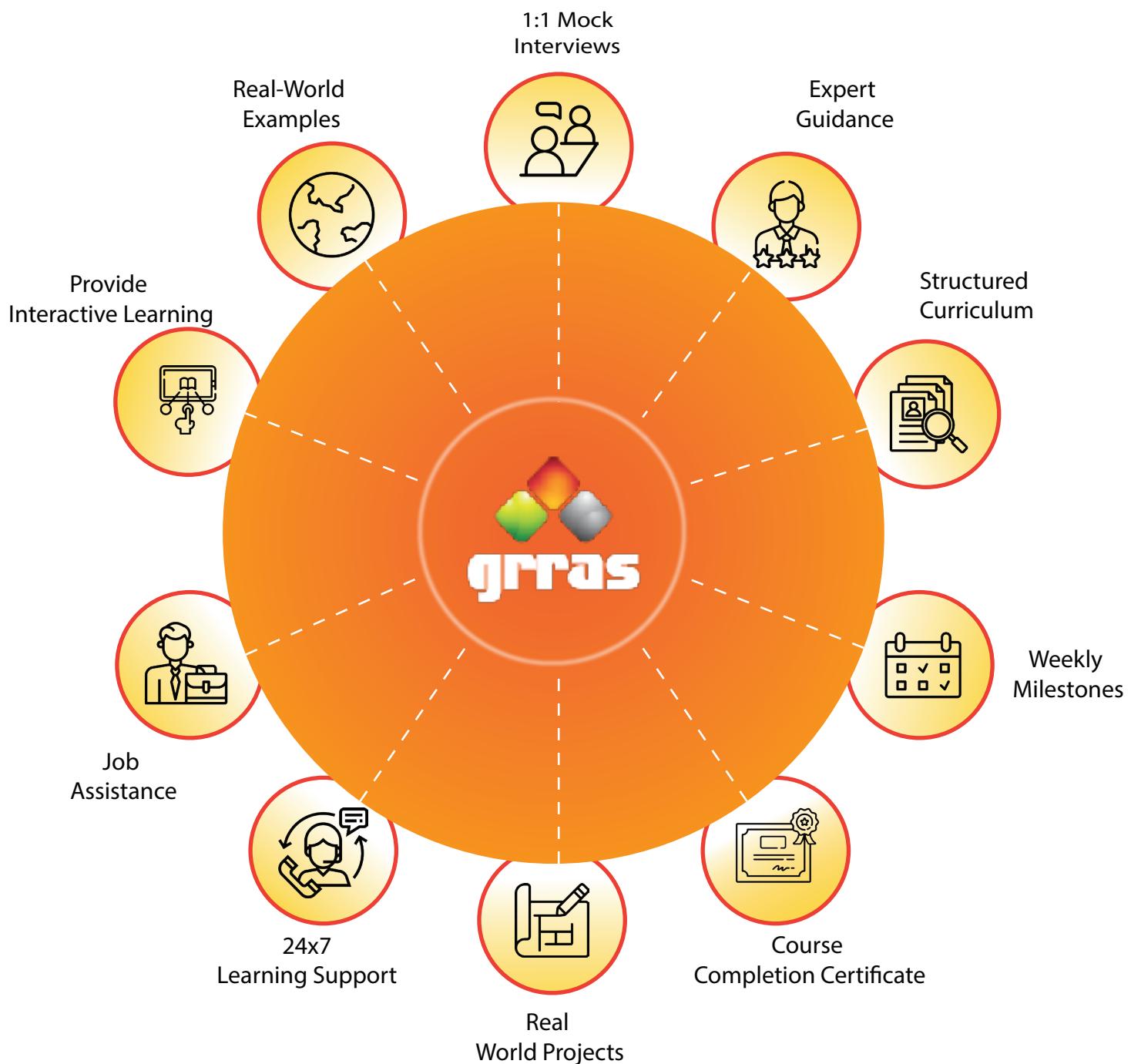
Inventory Management System

The image shows the homepage of JobDive. At the top, there is a navigation bar with links for Home, Job, Categories, Paper, Blog, Contact, and a sign-in/out button. Below the navigation is a large search bar with the placeholder text "Search for a job, skill, or company name". Underneath the search bar, there are three dropdown menus: "Industry", "Experience", and "Job Type". A large, bold text "3,000+ Browse Jobs" is displayed, followed by the subtext "Find Jobs, Employment & Career Opportunities". At the bottom of the page, there is a footer with several category links: "Job Types", "Job Categories", "Job Skills", "Job Locations", "Job Companies", "Job Tags", and "Job Tools".

Job Portal

Why GRRAS for Core Java?

Learning data analytics from GRRAS Solutions equips you with industry- and job-ready skills. It enhances your chances of getting placed in top organizations, opening numerous opportunities for career growth.



100% Job Assistance

Yes, you heard it right! Our course not only offers expert learning but also guarantees 100% job assistance. With a dedicated team of job coordinators and 500+ hiring partners, we're committed to ensuring your success in landing your dream job.

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Get an Accredited and Recognized Certificate upon successful completion of this course.



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This certificate is *Awarded* to

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for successfully completing the

at

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Unique Certificate No.

GD-635023

A handwritten signature in blue ink, appearing to read "Ranil Doshi".

DIRECTOR



DATE _____

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When Our Students Succeed, We Succeed! Where Our Proud Alumni SHINE



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and 600+ companies

Hear It Directly From Our Students!

At GRRAS Solutions, my experience has been excellent. The faculty is extremely supportive and knowledgeable, and they are always willing to go above and beyond to ensure that students comprehend the material. The curriculum is well-organized and provides a good balance of theoretical knowledge and real-world experience.

Nishant bhatia |



I recently completed the MERN Stack Development course at GRRAS Institute, and I couldn't be happier with the experience. The instructors are knowledgeable, patient, and genuinely invested in helping you succeed. The course was well-structured, covering everything from the basics to more advanced concepts, with plenty of hands-on projects that really helped solidify my understanding.

Tushar Saxena |



I Kapil Dilawar I completed mern stack website development course of 4 months. I enjoyed so much teachers were so experienced and friendly in nature they gave me all answer of my doubts as much as they can do. this period of my life was best I completed html ,css ,java script ,react ,redux ,node js etc.

Kapil Dilawar |



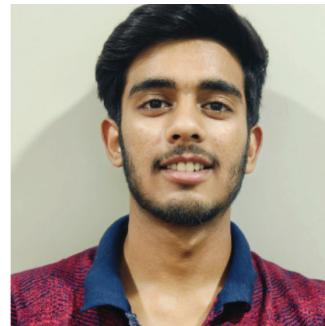
GRRAS must be one of the best institutes in Jaipur. The kind of support and guidance they provide, it will definitely help you to grow and achieve the target you are looking for in your career. As far as my opinion is concerned, don't look for the other options

karan parwani |



Completing my internship at GRRAS Solutions Private Limited was a rewarding experience. The knowledgeable mentors, hands-on projects, and supportive environment significantly enhanced my technical skills. The structured program and continuous feedback prepared me well for my career. I highly recommend GRRAS Solutions for a comprehensive

Paras Gulganshi |



I recently completed the 45-day Front End Web Development with Advanced React.js course at GRRAS Institute and found it highly beneficial. The curriculum was comprehensive, starting with HTML, CSS, and JavaScript fundamentals before diving deep into advanced React.js topics like hooks, state management, and performance

Rakshit Mathur |



The best trainers are here. Here we learn how to use all the advanced tools very well. Along with technical training, workshops are also organized for the trainees to develop communication skills which are in high demand

Chinmay Sharma |



Great experience in learning with techies and mentors with great knowledge in their respective domains. Mentors are very easy to approach and always available for help.

Akshat Bari |



I've been attending coaching sessions at GRRAS Coaching Center for the past THREE months, and I must say, it has been an incredibly enriching experience. Trainer, our coach, has been instrumental in guiding me through various challenges and helping me achieve my goals.

Himanahu Rasganiya |



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