



# CODENERA

## Experiential Learning Centre

### CODING SPECIALIZATION

Experience **Top-Tier Education** with a **Proven Track Record**  
Offering **Unlimited Job Opportunities** Until **Successful Placement**



Phone No: **6364360789**

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## Our Alumni Works At



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## OUR SHINING STAR'S



Highest CTC Recorded

**Rafakat Hussain**  
Full Stack Developer



**Gopal Shekhawat**  
Full Stack Developer



**Amey Ghadge**  
AI Engineer



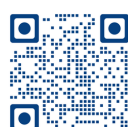
**Vaishnavi Jambe**  
AI/ML Engineer



**Pratiksha Patil**  
AI Engineer

**ENROLL NOW**

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# SYLLABUS

## CODING SPECIALIZATION

### 1. INTRODUCTION

- What is java, features and History
- Installation s/w: All required software installation for java programming

### 2. JDK, JRE AND JVM

- Introduction of JDK, JRE and JVM.
- Structure and Internal work of JVM, JDK and JVM

### 3. FIRST PROGRAM USING COMMANDS

- Hello World program using commands

### 4. IDE DETAILS AND PROGRAM USING IDE

- IDE Introduction, Hello World program using IDE

### 5. VARIABLES AND DATA TYPE

- Types of Variables, Datatype and Program

### 6. OPERATORS

- Datatype casting and Operators with programs

### 7. OPERATORS AND DATA TYPES PROGRAM

- Operators Program, Logical program practice

### 8. UNICODE SYSTEM AND NAMING CONVENTION

- Unicode System and Naming Convention

### 9. JAVA KEYWORDS

- Java Keywords

### 10. CONTROLS STATEMENT IN JAVA

- Introduction of types controller in java(Conditional, loop and Break)

### 11. CONDITIONAL STATEMENTS PROGRAM

- If, if else and nested if else program

### 12. TERNARY AND SWITCH STATEMENT

- Ternary and Switch statement program

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## CODING SPECIALIZATION

### 13. LOOPS

- While and Do while loops with program(Explain Initialization, Condition and Increment/Decrement:)
- Pattern with while loop
- Pattern with while loop
- Simple For Loops with program
- Nested for loops with program
- Practice for nested for loop
- Programs in Loops(all loops)
- Loop with Break and Continue Statement and ForEach loop
- Difference between for and foreach loop
- Logical program in loops

### 14. ARRAY

- Introduction of Array
- Single Dimension Array with program.
- Double Dimension Array with program
- Multi Dimension Array with program
- Difference between Array and Arrays
- Arrays functions
- Logical program in Array
- Logical program in Array - Placement centric

### 15. JAVA OOPS CONCEPTS

- Introduction of OOPS
- Advantage of OOPs and Methods
- Constructor and Programs in OOPS concept

### 16. INHERITANCE

- Inheritance and its type and program
- this and super keywords with Program

### 17. ABSTRACTION

- Abstraction
- Interface
- Difference between Abstraction and Interface

### 18. POLYMORPHISM

- Polymorphism
- Overloading and Overriding program
- Static keyword and super keyword
- Runtime polymorphism
- Dynamic binding
- Final keyword and Instance of Operator

### 19. ENCAPSULATION

- Encapsulation
- Package and Access modifier

### 20. METHODS

- METHOD chaining
- Object Cloning and its types
- Math class and recursion

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## CODING SPECIALIZATION

### 21. WRAPPER CLASS

- Wrapper class
- Type casting
- Call by Value

### 22. STRING

- String Introduction
- Immutable class
- String methods

### 23. STRING PROGRAM

### 24. STRING BUFFER

- String buffer
- Difference between StringBuffer and String
- Programs

### 25. STRING BUILDER

- String builder
- String vs String builder
- programs

### 26. EXCEPTION HANDLING

- Exception Handling
- Try and catch block
- Multiple catch block

### 27. NESTED TRY AND CATCH

- Nested try and catch
- Finally block

### 28. CUSTOM EXCEPTION

- Throw keyword
- Exception Propagation
- Throws keyword
- Exception Handling with Method Overriding
- Custom Exception

### 29. MULTITHREADING

- Multithreading and its life cycle
- What is Thread
- Creating Thread
- Thread Scheduler
- Sleeping a thread
- Joining a thread
- Thread Priority
- Daemon Thread
- Thread Pooling
- Thread Group
- Performing multiple task by multiple thread
- Garbage Collection
- Runnable class
- Synchronization
- synchronized method
- synchronized block
- static synchronization
- Inter-thread Communication
- Interrupting Thread

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### 30. JAVA I/O

- FileOutputStream & FileInputStream
- BufferedOutputStream & BufferedInputStream
- File Writer & File Reader
- Print Stream class
- Print Writer class
- Compressing and Uncompressing File
- Reading and Writing data simultaneously
- DataInputStream and DataOutputStream
- Serialization

### 31. COLLECTION

- Collection Framework and Structure
- Collection Methods

### 32. LIST

- List and ListIterator interface
- LinkedList, method and internal work
- ArrayList, method and internal work
- Vector, method and internal work
- Stack, method and internal work

### 33. SET

- Set and Methods
- HashSet
- LinkedHashSet
- TreeSet

### 34. MYSQL

- Installation of MySQL
- Types of DB
- DB software, files and Variables and Data types
- DB connection
- MySQL Workbench
- Creating DB using command and tools
- Queries
- CRUD operation of DB(Create table, dlt table etc)
- CLAUSES
- MYSQL indexes
- Controllers (if, if else etc)
- Conditions
- Keys
- JOINS
- Triggers
- Aggregate Functions
- Stored function
- Procedure
- Regular Expressions
- Alias

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### 35. JDBC

- What is JDBC
- JDBC driver
- DB Connectivity steps
- Driver Manager
- Connection interface
- Statement interface
- ResultSet interface
- PreparedStatement
- CallableStatement
- ResultSetMetaData
- DatabaseMetaData
- Transaction Management

### 36. HTML

- HTML
- Html Tags
- HTML Basic
- HTML Paragraphs
- HTML Styles
- HTML Text Formatting
- HTML Comments
- HTML Tables
- HTML Lists
- HTML Forms

### 37. CSS

- CSS Introduction
- CSS Selectors
- CSS Comments
- CSS Colors
- CSS Backgrounds
- CSS Borders
- CSS Padding
- CSS Box Model
- CSS Display
- CSS Positions

### 38. JS

- JavaScript
- JavaScript Variabables
- Java Scrip Conditinal Statemennt
- JavaScript Loop Control Statement,
- JvaScript Array
- Data types
- function
- Window
- String
- BOM
- Events
- EventListner
- DOM

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# SYLLABUS

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## CODING SPECIALIZATION

### 39. ADVANCE JAVA

- Spring
- Stream API
- API Creation
- Micro Services

### 40. CAPSTONE PROJECT

- E-Learning using Spring MVC.
- Weather Predictions using Spring MVC
- E-commerce website(frontend+backend)
- . Hospital Management System
- Portfolios Website
- Amazon Clone
- Instagram Clone

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# CODENERA'S 360 DEGREE CAREER SUPPORT



## ABOUT THE COURSE

**6 MONTHS DURATION**

24/7 support

**ANY GRADUATE OR FINAL YEAR DEGREE STUDENT IS ELIGIBLE TO REGISTER**

## WHAT YOU GET

Experience and **Hands-on Internship Letter**

**Notes:**