

<b>Course Contents for Dream Job: Advanced Data Structures, Algorithms &amp; Java Programming</b>
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<b>Introduction to Java Programming</b>
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Your first Java Program
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Introduction to Classes, Objects and Methods
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Control Statements
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Assignment 1
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Arrays
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Object Oriented Programming Concepts - Inheritance & Polymorphism
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Assignment 2
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Exception Handling
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Assignment 3
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Interview Preparation Session 1: Java Programming Questions
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<b>Introduction to Object Oriented Design</b>
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Case Study 1: Design Workshop
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Requirements Analysis
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Creating a Requirements Document
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Identifying Classes, Attributes and Methods
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Introduction to UML - Class Diagrams, Sequence Diagrams
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Case Study 1 Implementation
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Interview Preparation Session 2: Object Oriented Design Questions
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<b>Problem Solving</b>
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Introduction to Computer Problem Solving
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Fundamental Algorithms
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Assignment 1
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Factoring Methods
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Assignment 2
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Array Techniques
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Assignment 3
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Merging, Sorting & Searching
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Assignment 4
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Text Processing & Pattern Searching
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Assignment 5
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Dynamic Data Structures
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Assignment 6
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Recursive Algorithms
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Assignment 7
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Interview Preparation Session 3: Problem Solving, Data Structures & Algorithms
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<b>Advanced Java Programming</b>
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Strings, Characters & Regular Expressions
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Files, Streams & Object Serialization
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Assignment 1
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Recursion
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Assignment 2
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Generic Collections
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Generics
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Assignment 3
Multithreading
Assignment 4
Database Programming
Assignment 5
REST Web Services Development
Case Study 2: SDLC Workshop
Requirements Analysis
Design - High-level & Low-level design
Implementation
Testing
Interview Preparation Session 4: Advanced Java Programming Concepts