



## Become a Data Structure and Algorithm Professional - (Beginner - Advanced)

**Skill level:** Beginner - Advanced

**Training fee:** INR 15999 only (Topics covered: 192)

**Chief Trainer:** [Mr. Devanshu Shukla](#)

**Training Duration:** 32 days (3 hrs per day) | 48 days (2 hrs per day) | 96 days (1 hr per day)

**Presentation or Examination will be conducted within 32 days** from date of training completion.

\* Please note examination will be conducted after completion of training.

**Maximum examination attempts:** 03

**Minimum passing marks for certification and placement:** 90%

**Query Membership:** 01 year (Online / Offline)

**Spoken Language:** English / Hindi

**Venue:** Hackveda, H-3/60, III Floor, Sector-18, Rohini, Delhi-110089

**Contact person:** Mr. Yash Sharma, Software Engineer, Hackveda

**Contact phone:** 011-27297608, +91-9654825370, +91-9891799066

**Registration link:** [Register Now](#)

**Hackveda One2One Support Available:**

Training session video will be recorded and delivered to students via our Digital Learning platform [Hackveda One2One](#) for any time, any where learning and practice.

**Join the training at Hackveda 'TODAY' !**

**Course contents**

One-Dimensional Arrays

Working with Arrays

Two-Dimensional Arrays

Multi-Dimensional Arrays

Lesson 1 Test

Strings and Character Arrays

Reading and Writing Strings and Characters

Manipulating Strings

Lesson 2 Test

Declaring Structures

Using Nested Structures

Structures and Arrays

Structures and Functions

Pointing to Structures

Structures and Bit Fields

Lesson 3 Test

Introduction to Data Structures

Introduction to Algorithms

Introduction to Time and Space Complexity

Introduction to Static Arrays

Introduction to Dynamic Arrays

Introduction to Recursion Using Binary Search

Lesson 4 Test

Introduction to the Stack

Introduction to Queues

Introduction to the Linked List

Lesson 5 Test

Introduction to the Binary Search Tree

Binary Search Tree ? Performing a Search

Binary Search Tree ? Inserting Elements

Binary Search Tree ? Deleting Elements

Lesson 6 Test

Introduction to Sorting ? Bubble Sort

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Sorting Using Quicksort

Lesson 7 Test

Representing Graphs ? Adjacency List

Representing Graphs ? Adjacency Matrix

Graph Searching ? Breadth First Search

Graph Searching ? Depth First Search

Graph Sorting ? Topological Sort

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Hashed Data Structures ? The Hash Function

Hashed Data Structures ? Perfect vs Non-Perfect Hashing

Hashed Data Structures ? Handling Collisions

Lesson 9 Test

Exercise: Using Algorithms and Data Structure in C++

Course Test

Introduction to STL Algorithms in C++

Using std-for\_each in C++ Lambda Expressions

Introduction to Iterators Using Find in C++

Using std-find\_if in C++

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Using Nonmodifying Algorithms with Containers

Lesson 10 Test

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Using std-partition and stable\_partition in C++

Using Modifying Algorithms with Containers

Lesson 11 Test

Exercise: Working with Algorithms in C++

Course Test

Java Primer

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1.2: Classes and Objects

1.3: Strings Wrappers Arrays and Enum Types

1.4: Expressions

1.5: Control Flow

1.6: Simple Input and Output

1.7: An Example Program

1.8: Packages and Imports

1.9: Software Development

Object-Oriented Design

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2.2: Inheritance

2.3: Interfaces and Abstract Classes

2.4: Exceptions

2.5: Casting and Generics

2.6: Nested Classes

2.7: Course Test

Fundamental Data Structures

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3.2: Singly Linked Lists

3.3: Circularly Linked Lists

3.4: Doubly Linked Lists

3.5: Equivalence Testing

3.6: Cloning Data Structures

3.7: Course Test

Algorithm Analysis

Overview

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4.2: The Seven Functions Used in This Book

4.3: Asymptotic Analysis

4.4: Simple Justification Techniques

4.5: Course Test

Recursion

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5.2: Analyzing Recursive Algorithms

5.3: Further Examples of Recursion

5.4: Designing Recursive Algorithms

5.5: Recursion Run Amok

5.6: Eliminating Tail Recursion

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6.2: Queues

6.3: Double-Ended Queues

List and Iterator ADTs

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7.2: Array Lists

7.3: Positional Lists

7.4: Iterators

7.5: The Java Collections Framework

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8.2: Binary Trees

8.3: Implementing Trees

8.4: Tree Traversal Algorithms

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12.4: Comparing Sorting Algorithms

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Graph Algorithms

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14.2: Data Structures for Graphs

14.3: Graph Traversals

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14.5: Directed Acyclic Graphs

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Memory Management and B-Trees

15.1: Memory Management

15.2: Memory Hierarchies and Caching

15.3: External Searching and B-Trees

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## How to Join

- 1.) Register your name online at [Register Now](#)
- 2.) Deposit your training fee via IMPS / NEFT / PAYTM / Google Tez / Phone Pe or Cash Deposit at Training Centre
- 3.) Send snapshot / transaction number via Whatsapp to +91-9654825370 or Email us at admin@hackveda.in
- 4.) Bill will be generated and sent to your Email ID, Hackveda One2One account details will also be sent via sms and email. You can also collect Hackveda One2One account details from training centre.

### Bank Details for IMPS / Paytm to Bank / NEFT / ATM - Cash Deposit

Name: Devanshu Shukla

Account Number: 55142333064

Bank Name: State Bank of India

Branch: Rama Market, Pitampura

IFS Code: SBIN0050403

### Pay via PayTM / Google Tez / Phone Pe

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### Optional Pre-requisites

Laptop & Charger, 4GB+ Pendrive, Headphones

### Training Centres

Hackveda - H-3/60, III Floor, Sector-18, Rohini, Delhi - 110089