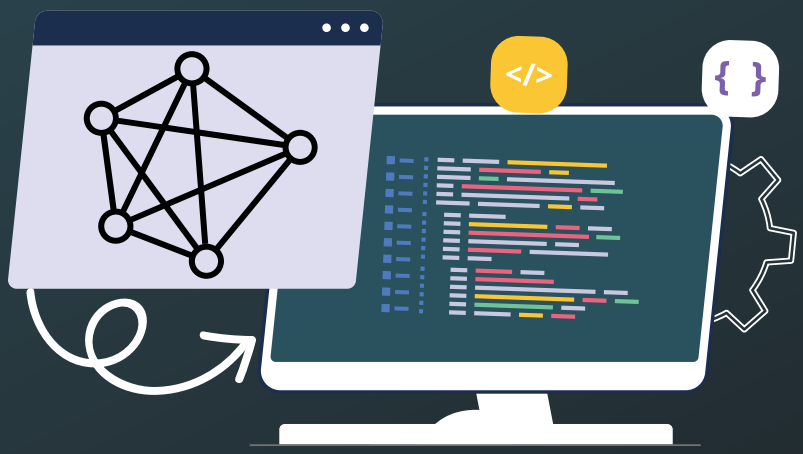
GeeksforGeeks

DSA
to Development

A Complete Guide



Detailed
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FLOW CONTROL

FUNCTIONS

LOOPS

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STRING

LIST

RESUME BUILDING

PROGRAMMING LANGUAGES

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OBJECT ORIENTED PROGRAMMING

- Classes and Objects
- Inheritance and Polymorphism : Overloading and Overriding
- Abstraction and Encapsulation
- Access Modifiers
- Friend and Virtual functions in C++
- static, final, this and super keywords and Interfaces in Java

DATA STRUCTURES (BASICS)

Analysis of Algorithms:

- Growth of functions
- Asymptotic Notations Omega, Theta,
- Recursion Tree Method
- Space Complexity

Arrays:

- Insertion, Deletion, Updation, Shifting
- Reversal, Sort Check, Maximum, Minimum

Recursion

- Introduction to Recursion
- Tail Recursion
- Natural Number Check Using Recursion
- Palindrome Check Using Recursion
- Sum of Digits, Rod Cutting and Subsets
- Tower of Hanoi

Hashing:

- Introduction to Hashing
- Direct Address Table
- Collision Handling
- Chaining
- Open Addressing
- Double Hashing
- Chaining Vs Open Addressing

String:

- Introduction to Strings

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LIBRARIES

C++ STL

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Java Collections

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DATA STRUCTURES (ADVANCED)

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DATA STRUCTURE (BASICS)

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DATA STRUCTURE - ADVANCED

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Practice Problems

This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned

- GRAPH

Practice Problems

This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned

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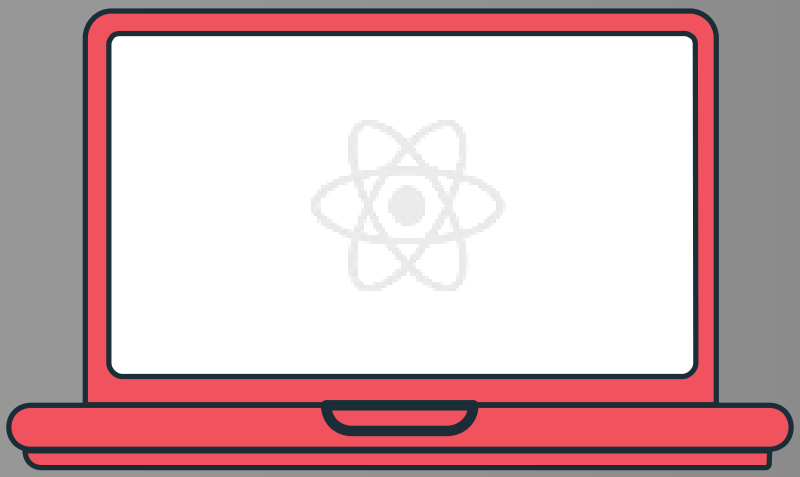
Full Stack Development with React & Node JS

LIVE



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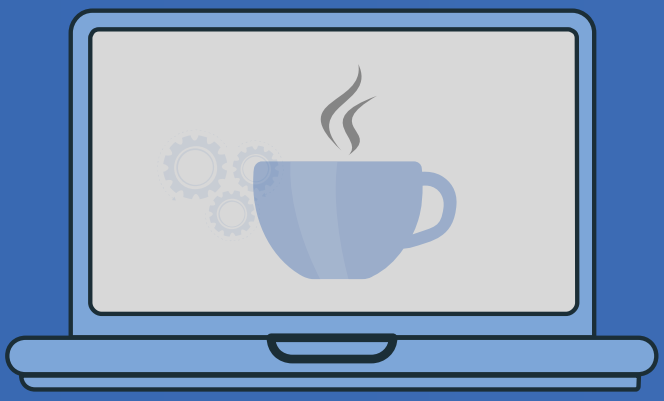
JAVA

Backend Development

LIVE



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Week 01

Week 02

Week 03

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Week 09

Week 10

Data Science Training Program

LIVE

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- Handling missing data
- Removing duplicates and dealing with Outliers
- Cleaning and adjustments in data

Day 2: Exploratory Data Analysis (EDA) with Pandas

- Descriptive Statistics and data summarization
- Grouping and Aggregating data
- SQL-like operation in data

Day 3: Data Visualization with Matplotlib

- Creating Basic Plots (line plots, scatter plots, histograms)
- Customizing and Styling Visualizations
- Creating Informative and Aesthetically Pleasing Visualizations
- Pair plots, Heatmaps, and Advanced Plotting technique

Week 3: Data analysis using Python

Day 1: Knowing about the data

- Types of analysis - univariate, Multivariate analysis
- Creating Hypothesis of Project Approach
- Introduction to Statistical tests and Hypothesis testing
- Implementing Statistical tests in Python

Day 2: Final Project and Case Studies

- Participants work on a real-world data analysis project
- Applying learned Python skills to analyze and visualize data

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