DATA STRUCTURE & ALGORITHM – PYTHON

CURRICULUM

DAYS	TOPICS
DAY 1	**INTRODUCTION** • Data Structure & Algorithm
	• What is Time Complexity • Introduction to Asymptotic Notations [Big O ,Big Omega , Big Theta]
DAY 2	• Remaining part of Asymphotic Notations • Bet,Worst and Avg case Analysis of an Algorithm
	• Calculate time complexity of Algorithm QUIZ-1
DAY 3	• What is Array • Abstract Data Type in Data Structure
	• Array as an Abstract Data type in Data Structure • Implementation of Array as an Abstract Data Type

DAY 4	• Array Operations • Insertion Operation in Array • Deletion in Array
	• Linear & Binary Search QUIZ-2
DAY 5	**LINKED LIST** • Concept • Creation & traversal
	• Insertion of Node • Insertion in a linked list
DAY 6	• Deletion in Linked List • Deletion of Node from a Linked List
	• Intro to Circular Linked List • Operations in Circular Linked List QUIZ-3
DAY 7	• Intro to Doubly Linked List • Intro to Stack in Data Structure
	• Stack Implementation • Operations of Stack [Push,Pop,isEmpty,isFull]

DAY 8	• Peek Operations in Stack using Array • Other Stack Operations [stackTop,stackBottom]
	• Stack using Linked List Quiz-4
DAY 9	• Implementation of Stack Operations using Linked List
	Queue • Implementation • Implementation using Array
DAY 10	Operations of Queue
	Circular Queue Introduction
DAY 11	Other Queue Operations [enqueue,dequeue] Quiz-5
	Queue using Linked List and Implementation

DAY 12	• Double Ended Queue
	• Intro to Sorting Algorithm • Criteria for analysis of sorting algorithm
DAY 13	**Bubble Sort** • Intro to Bubble sort • Implementaion
	Insertion Sort • Intro • Implementation
DAY 14	**Selection Sort** • Intro • Implementation
	Merge Sort • Intro • Implementation
DAY 15	**Count Sort** • Intro • Implementation
	Trees • Intro • Types of Tree

DHRUVON
ADAPT RENEW EVOLVE