

## **Data Structures Practice Questions**

1. Write a program to implement a stack using arrays.
2. Write a program to implement a queue using linked list.
3. Write a program to perform the operations of a singly linked list (insert, delete, display).
4. Write a program to reverse a linked list.
5. Write a program to implement the insertion sort algorithm.
6. Write a program to implement the merge sort algorithm.
7. Write a program to implement the quick sort algorithm.
8. Write a program to implement a binary search tree (BST).
9. Write a program to search for an element in a binary search tree.
10. Write a program to perform in-order, pre-order, and post-order traversal on a binary tree.
11. Write a program to implement a graph using an adjacency matrix.
12. Write a program to implement depth-first search (DFS) for a graph.
13. Write a program to implement breadth-first search (BFS) for a graph.
14. Write a program to find the shortest path in a graph using Dijkstra's algorithm.
15. Write a program to implement a priority queue using a heap.
16. Write a program to implement the bubble sort algorithm.
17. Write a program to implement the selection sort algorithm.
18. Write a program to find the intersection of two sorted arrays.
19. Write a program to implement the heap sort algorithm.
20. Write a program to implement a circular queue.