**DSA Interview questions**

1. Explain the concept of time complexity. How does it help in analyzing algorithms?

2. Describe the difference between arrays and linked lists. When would you choose one over the other?

3.What is recursion, and how does it work? Can you provide an example of a problem that can be solved using recursion?

4. Discuss the importance of sorting algorithms. Can you name a few sorting algorithms and explain their basic principles?

5. Explain the difference between depth-first search (DFS) and breadth-first search (BFS). When would you use each algorithm?

6. What is a hash table, and how does it work? Describe a scenario where you would use a hash table.

7. Discuss the concept of dynamic programming. Can you provide an example of a problem that can be solved using dynamic programming?

8. Explain the difference between a stack and a queue. Provide real-life examples where you would use each data structure.

9. Describe the process of binary search. How does it work, and what are its advantages over linear search?

10. Discuss the concept of a binary tree. What are the different types of binary trees, and how do they differ?