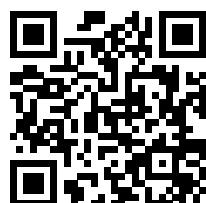




## **SoulShift - Educational Q&A Platform**

### **General Questions**

Practice Questions



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**Q1. What is the time complexity of a depth-first search (DFS) on a graph?**

- A.  $O(V)$
- B.  $O(E)$
- C.  $O(V + E)$
- D.  $O(V * E)$

*Solution: DFS visits each vertex and edge once, leading to a time complexity of  $O(V + E)$ , where  $V$  is vertices and  $E$  is edges.*

**Q2. What is the time complexity of quicksort in the average case?**

- A.  $O(n)$
- B.  $O(n \log n)$
- C.  $O(n^2)$
- D.  $O(\log n)$

*Solution: Quicksort has an average-case time complexity of  $O(n \log n)$  due to the divide-and-conquer approach.*



