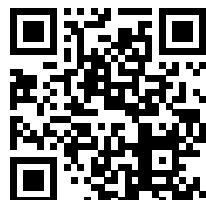




## **SoulShift - Educational Q&A Platform**

### **General Questions**

Practice Questions



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**Q1. Why is time complexity important in algorithm design?**

- A. It determines the memory usage of an algorithm
- B. It helps predict the performance of an algorithm
- C. It defines the data structure to be used
- D. It is irrelevant to real-world applications

*Solution: Time complexity is important as it helps predict the performance of an algorithm, especially with large inputs.*

**Q2. Why are Red-Black trees preferred in certain applications over AVL trees?**

- A. They are simpler to implement
- B. They guarantee faster search times
- C. They require fewer rotations during insertions and deletions
- D. They are more memory efficient

*Solution: Red-Black trees require fewer rotations during insertions and deletions, making them more efficient in scenarios with frequent updates.*



