1. Compare and contrast stack vs. queue.
2. What is the need for dynamic memory allocation in C?
3. How does a binary search work step by step?
4. What is the worst-case time complexity of the quicksort algorithm?
5. List different OS schedulers and explain their roles.
6. TCP vs. UDP: Which one is better for real-time communication?
7. How does an index optimize database performance?
8. Why is database normalization important in relational databases?
9. HTTPS encrypts data, but how is it different from HTTP?
10. Describe a hash function and its significance in cryptography.
11. Why is object-oriented programming widely used in modern software development?
12. How does Java use garbage collection for memory management?
13. Identify three main types of machine learning approaches.
14. What is the function of hidden layers in a neural network?
15. Blockchain uses cryptography—how does it secure data?