

- 1) In the context of databases what is the purpose of the 'JOIN' operation?
 - a. Combine rows from two or more tables
 - b. Insert a new row
 - c. Update existing records
 - d. Delete records
- 2) What is the function of a 'firewall' in computer security?
 - a. Monitor and control incoming and outgoing network traffic
 - b. Detect and remove viruses
 - c. Encrypt files
 - d. Manage user access permissions
- 3) What is the purpose of the 'grep' command in Unix/Linux?
 - a. Search text patterns in files
 - b. Copy files
 - c. Delete files
 - d. Create directories
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- 5) What is the time complexity of the quicksort algorithm in the average case?
 - a. $O(n \log n)$
 - b. $O(n^2)$
 - c. $O(n)$
 - d. $O(\log n)$
- 6) What is the purpose of the 'UDP' (User Datagram Protocol) in networking?
 - a. A connectionless protocol for fast data transmission
 - b. A secure data transfer protocol
 - c. A protocol for email communication
 - d. A protocol for file sharing
- 7) What does the acronym 'SQL' stand for?
 - a. Structured Query Language
 - b. System Query Language
 - c. Sequential Query Language
 - d. Structured Question Language

8) What is the difference between 'stack' and 'heap' memory allocation?

- a. Stack memory is used for local variables and function call management while heap memory is used for dynamic memory allocation
- b. Heap memory is faster than stack memory
- c. Stack memory is used for dynamic memory allocation while heap memory is used for local variables and function call management
- d. Heap memory is more secure than stack memory

9) What is a 'buffer overflow' in computer security?

- a. When a program writes more data to a block of memory than it was allocated
- b. A type of malware
- c. A denial-of-service attack
- d. A form of encryption

10) Which programming language was created by Microsoft?

- a. C#
- b. Java
- c. Python
- d. Ruby