Cvent interview Sheet

SQL and Database Management

1. What is normalization, and why is it important in database design?
2. Explain the difference between INNER JOIN and LEFT JOIN.
3. How do you optimize a SQL query?
4. What are indexes, and how do they improve query performance?
5. Describe the ACID properties of a transaction.
6. What are clustered and non-clustered indexes?
7. How do you handle deadlocks in SQL databases?
8. What are views, and when would you use them?
9. Explain the purpose of a foreign key and referential integrity.
10. What is a stored procedure, and how is it used?
11. How do you implement database partitioning, and what are its benefits?
12. What is a trigger in SQL, and when would you use one?
13. How do you ensure data consistency in distributed databases?
14. What is a composite key, and how is it different from a primary key?
15. Explain the differences between SQL and NoSQL databases.

Programming Languages

1. Which programming languages are you proficient in?
2. Can you explain the concept of object-oriented programming?
3. What is the difference between synchronous and asynchronous programming?
4. How do you handle exceptions in your code?
5. Explain the concept of recursion with an example.
6. What are design patterns, and name a few commonly used ones.
7. Explain deep copy vs. shallow copy.
8. What is garbage collection, and how does it work?

9. Describe stack vs. heap memory management.

10. What are lambda expressions, and where are they used?

11. What is polymorphism, and how is it implemented in OOP?

12. Explain the difference between interfaces and abstract classes.

13. What is multithreading, and how does it improve performance?

14. How does a compiler differ from an interpreter?

15. What are generics, and why are they useful?

Web Development

1. What is RESTful API, and how does it differ from SOAP?

2. Describe the MVC architecture pattern.

3. How do you ensure web application security?

4. What are cookies and sessions?

5. Explain the concept of responsive design.

6. What is the same-origin policy in web security?

7. How do you implement authentication and authorization?

8. What are HTTP status codes, like 200, 404, and 500?

9. Explain Cross-Origin Resource Sharing (CORS).

10. What are the benefits of using a Content Delivery Network (CDN)?

11. How can you optimize the loading time of a web page?

12. What is WebSockets, and how does it differ from HTTP?

13. Explain how AJAX works in web development.

14. What are web components, and how are they used?

15. How do you implement form validation in JavaScript?

Data Structures and Algorithms

1. What is a linked list, and how does it differ from an array?

2. Explain the time complexity of common sorting algorithms.

3. What is a hash table, and how does it work?

4. Describe a binary tree and its traversal methods.

5. How would you find the shortest path in a graph?

6. How do you detect a cycle in a linked list?

7. Describe dynamic programming with an example.

8. What is memoization, and how is it used?

9. Explain a stack vs. a queue.

10. What is a trie data structure, and where is it used?

11. How does a binary search tree differ from a heap?

12. What is the significance of graph algorithms like BFS and DFS?

13. Describe the concept of greedy algorithms.

14. How do you implement a balanced binary tree, such as AVL?

15. Explain how to use two-pointer technique for solving problems.

Networking

1. What is DNS, and how does it work in resolving domain names to IP addresses?

2. What is the difference between TCP and UDP, and when would you use each protocol?

3. Explain the OSI model and briefly describe each layer.

4. What is the purpose of subnetting, and how does it work?

5. Describe how DHCP works and why it is important in a network.

6. What is NAT (Network Address Translation), and how does it benefit network design?

7. Explain the concept of VLANs and why they are used in network management.

8. What is a VPN, and how does it ensure secure communication over a public network?

9. How does ARP (Address Resolution Protocol) work in networking?

10. What is the difference between a switch and a router, and how do they function in a network?

Emerging Technologies

1. What are your thoughts on machine learning applications?

2. How do you see AI impacting event software?

3. Explain blockchain and uses beyond cryptocurrencies.

4. What experience do you have with data analytics?

5. Describe IoT's relevance to event management.

6. What is edge computing, and why is it important?

7. How does AR enhance user experience?

8. What are the risks and benefits of 5G?

9. Explain natural language processing (NLP) uses.

10. What is quantum computing, and its potential impact?

11. How do you evaluate new technologies for projects?