

Deloitte Technical & Coding

1.What is backpropagation?

Answer:Backpropagation is a technique used in artificial intelligence (AI) to fine-tune mathematical weight

functions and increase the accuracy of an artificial neural network's outputs.

2.What are the features of cloud computing?

Answer:Features of Cloud Computing:

On-demand self-service:

The Cloud computing services do not require any human administrators; users can provide, monitor, and manage computing resources as needed.

Broad network access:

Computing services are typically delivered using regular networks and heterogeneous devices.

Rapid elasticity:

Computing services should have IT resources that can expand out and in on an as-needed basis. When a user requests a service, it is delivered to him, and it is scaled down as soon as its demand is met.

Resource pooling:

The IT resources (e.g., networks, servers, storage, apps, and services) available are uncommitted and shared across numerous applications and occupants. Multiple clients are served by the same physical resource.

Measured service:

The resource use is tracked for each application and tenant, providing an account of what has been consumed to both the user and the resource provider. This is done for a variety of reasons, including billing monitoring and resource utilization.

3.What is the function of IEEE in computer networking?

Answer:The IEEE, or Institute of Electrical and Electronics Engineers, is a group of engineers who create and administer standards for electrical and electronic devices. Networking equipment, network interfaces, cabling, and connectors are all included.

4.What are access specifiers in C++?

Answer: There are three types of access specifiers in C++:

Public: Members can be accessed (or viewed) from outside the class if they are public.

Private: Members cannot be accessed (or viewed) from outside the class if they are private.

Protected: Members that are protected cannot be accessible from outside the class, although they can be accessed in inherited classes.

5. Define SMTP.

Answer: The Simple Mail Transfer Protocol is a widely used internet protocol for sending electronic mail. SMTP is a protocol that allows mail servers and other message transfer agents to send and receive mail messages.

6. Define tunnel mode.

Answer: A method of delivering data over the Internet known as “tunnel mode” encrypts both the material being sent and the original IP address information. Both transport mode and tunnel mode are used by the encapsulating security payload (ESP). ESP encrypts the IP header information and the data when in Tunnel Mode.

7. What are the differences between array list and vector?

8. What are the differences between a straight-through and crossover cable?

9. How is the CSMA/CD different from the CSMA/CA?

10. Write a program to check whether a number is a perfect number or not. [C or C++ or JAVA]

11. Write a program to check whether a number can be expressed as a sum of two prime numbers using JAVA.

12. What are the differences between Echo and Print in PHP?

13. Problem Statement : Arnab has given me a challenge. I have to calculate the number of numbers which are less than a certain value n , and have exactly k set bits in its binary form.

As you are a Prepster like me, help me write a code that will take input for n and k and give the expected output.

Constraints :

$1 \leq n \leq 10000$

$1 \leq k \leq 10$

Input Format :

First line containing n and k space separated

Output Format :

Number of numbers present in a single line

Sample Input:

7 2

Sample Output:

3

Explanation:

11,110,101 -> These three numbers.[C++ or JAVA or Python]he above rounds.