

MOCK INTERVIEW QUESTIONS (DATASCIENCE)

1. What is a frozenset?
2. Differentiate between break and continue statements in python.
3. Which is the mapping datatype in python?
4. How can we change a value in a tuple?
5. Mention any 2 properties of a set.
6. What are constructors in python?
7. What is the relevance of __init__() constructor?
8. Differentiate between method overloading and method overriding.
9. How can we create an infinite loop that prints “welcome to the world of coding”?
10. Differentiate between primary and foreign key in MySQL.
11. Differentiate between precision and recall in connection with a classification model.
12. Why logistic regression is named so even though it is a classification algorithm?
13. Why do we need to split a dataset into training and testing set before training the model?
14. What is underfitting? How can we overcome it?
15. What is overfitting? How can we overcome it?
16. Differentiate between bagging and boosting.
17. What is the role of an activation function in a neural network?
18. If the number of nodes in the input layer of an artificial neural network is 10 and the number of nodes in the first hidden layer is 20, what is the maximum number of possible links between these 2 layers?
19. Why do we use pooling in a CNN network?
20. What are the drawbacks of a simple RNN network?
21. Explain vanishing gradient problem/
22. Explain exploding gradient problem.
23. Differentiate between stemming and lemmatization.

24. Generate a 5 digit random code. The user needs to guess the code in 10 chances. The following hint codes can be provided to the user to help guessing the code each time.

- If the guessed digit is correct and is in the correct place, print C
- If the guessed digit is correct and is in the wrong place, print D
- If the guessed digit is not present in the code, print P

For example, if the code is 1780, and the user guessed it as 7481, the program should print DDCP. Using this hint the user needs to correctly guess the code within 10 chances.

25. Write a program to check for the presence of a substring in a main string. Receive both the main string and sub string from the user.
26. Print the following pattern with number of rows received from the user:

A
B C
D E F
G H I J

27. Print the following pattern with number of rows received from the user:

a
b b
c c c
d d d d

28. Find the product of digits of an integer received from the user. For eg, if the received number is 234, the output should be 24.

29. Find all the possible words that can be formed using the letters a,b,c without repeating the letters.

30. Write a program to play a game in which a die is tossed and the user needs to guess it. A person will get 5 chances and will win if a minimum of 3 guesses turns right else lose.

31. Following is the info about certain products and its cost (in ₹) in an online store.

Product	Cost (₹)
Product A	40
Product B	60
Product C	100

The fee for gift wrapping is ₹5 and shipping charge is ₹10. A person can shop any product in any number of units and can opt for a gift wrapping also. If the total cost of the purchase exceeds ₹500, no shipping charge will be applied. The task is:

- Ask the user for the products and number of units they want to purchase.
- Also ask whether they want gift wrapping or not.
- Calculate the total cost of each product and display it separately.
- Also calculate the subtotal, along with the gift wrapping fee and shipping charges if any, and display it.

32. Write a python program to toss a die to get a number between 1 and 6 (using random module) and do the following based on the number got.

- If die shows 1 or 2, print the following pattern where the number of rows is received from the user.

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- If die shows 3 or 4, receive a number from the user and print its multiplication table.
- If die shows 5, receive a string from the user and check whether it is a palindrome or not.

- If die shows 6, toss the die again to get any other number and do the corresponding task.

33. Create an object classification model that can classify between 4 different brands of cars.