

Python Program to Reverse a Number

```
num = int(input("Enter a number: "))
reverse_num = 0

while num > 0:
    remainder = num % 10
    reverse_num = (reverse_num * 10) + remainder
    num //= 10

print("Reversed Number:", reverse_num)
```

OUTPUT:-

Enter a number: 1234

Reversed Number: 4321

Python Program to Check if a Number is Prime

```
num = int(input("Enter a number: "))

if num > 1:
    for i in range(2, int(num ** 0.5) + 1):
        if num % i == 0:
            print(num, "is not a prime number")
            break
    else:
        print(num, "is a prime number")
else:
    print(num, "is not a prime number")
```

Python Program questions for interview

1. Basic Programs

1. Write a Python program to swap two numbers.
 2. Write a Python program to find the largest of three numbers.
 3. Write a Python program to check if a number is even or odd.
 4. Write a Python program to check if a number is positive, negative, or zero.
 5. Write a Python program to check if a character is a vowel or consonant.
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2. Number-Based Programs

6. Write a Python program to find the factorial of a number.
 7. Write a Python program to check if a number is prime.
 8. Write a Python program to print the Fibonacci series up to n terms.
 9. Write a Python program to reverse a number.
 10. Write a Python program to find the sum of digits of a number.
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3. Loop-Based Programs

11. Write a Python program to print all prime numbers in a given range.
 12. Write a Python program to print a multiplication table for a given number.
 13. Write a Python program to count the number of digits in a number.
 14. Write a Python program to find the GCD (Greatest Common Divisor) of two numbers.
 15. Write a Python program to check if a number is an Armstrong number.
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4. String-Based Programs

16. Write a Python program to check if a string is a palindrome.
 17. Write a Python program to count the number of vowels in a string.
 18. Write a Python program to find the frequency of each character in a string.
 19. Write a Python program to reverse a string without using the built-in function.
 20. Write a Python program to remove all duplicate characters from a string.
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5. List and Tuple Programs

21. Write a Python program to find the largest element in a list.
22. Write a Python program to find the second largest number in a list.
23. Write a Python program to count the number of occurrences of an element in a list.
24. Write a Python program to remove duplicates from a list.

25. Write a Python program to find the sum of all elements in a list.
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6. Dictionary-Based Programs

26. Write a Python program to count the occurrences of words in a string using a dictionary.
 27. Write a Python program to merge two dictionaries.
 28. Write a Python program to find the key with the maximum value in a dictionary.
 29. Write a Python program to create a dictionary from two lists.
 30. Write a Python program to sort a dictionary by values.
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7. File Handling Programs

31. Write a Python program to read a text file and display its contents.
 32. Write a Python program to count the number of words in a file.
 33. Write a Python program to copy the contents of one file to another.
 34. Write a Python program to find and replace a word in a file.
 35. Write a Python program to check if a file exists.
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8. Function-Based Programs

36. Write a Python function to check if a number is prime.
 37. Write a Python function to find the sum of all numbers in a list.
 38. Write a Python function to check if a string is a palindrome.
 39. Write a Python function to find the LCM (Least Common Multiple) of two numbers.
 40. Write a Python function to convert Celsius to Fahrenheit.
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9. Object-Oriented Programming (OOP)

41. Write a Python class to represent a student with attributes: name, age, and marks.
 42. Write a Python program to create a class for a bank account with deposit and withdrawal functions.
 43. Write a Python program to demonstrate inheritance with a `Person` and `Employee` class.
 44. Write a Python program to overload the `+` operator for adding two objects.
 45. Write a Python program to create a class `Rectangle` with methods to calculate area and perimeter.
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10. Recursion-Based Programs

46. Write a Python program to find the factorial of a number using recursion.
 47. Write a Python program to print the Fibonacci series using recursion.
 48. Write a Python program to calculate the sum of digits of a number using recursion.
 49. Write a Python program to find the GCD of two numbers using recursion.
 50. Write a Python program to reverse a string using recursion.
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Beginner Level

1. Write a Python program to print "Hello, World!".
 2. Write a Python program to add two numbers.
 3. Write a Python program to find the largest of three numbers.
 4. Write a Python program to check if a number is even or odd.
 5. Write a Python program to find the factorial of a number.
 6. Write a Python program to reverse a string.
 7. Write a Python program to check if a string is a palindrome.
 8. Write a Python program to count the number of vowels in a string.
 9. Write a Python program to find the sum of all elements in a list.
 10. Write a Python program to find the largest number in a list.
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Intermediate Level

11. Write a Python program to remove duplicates from a list.
12. Write a Python program to check if a number is prime.
13. Write a Python program to generate the Fibonacci sequence up to n terms.
14. Write a Python program to sort a list of numbers in ascending order.
15. Write a Python program to count the frequency of each element in a list.
16. Write a Python program to find the second largest number in a list.
17. Write a Python program to merge two dictionaries.
18. Write a Python program to find the length of a string without using the `len()` function.
19. Write a Python program to swap two variables without using a temporary variable.
20. Write a Python program to find the GCD (Greatest Common Divisor) of two numbers.

Advanced Level

21. Write a Python program to implement a binary search algorithm.
22. Write a Python program to implement a bubble sort algorithm.
23. Write a Python program to find the intersection of two lists.
24. Write a Python program to flatten a nested list.
25. Write a Python program to find the longest word in a sentence.
26. Write a Python program to count the number of words in a text file.
27. Write a Python program to reverse a list using slicing.
28. Write a Python program to implement a stack using a list.
29. Write a Python program to implement a queue using a list.
30. Write a Python program to find the sum of digits of a number.

Expert Level

31. Write a Python program to implement a linked list.
32. Write a Python program to implement a binary tree.
33. Write a Python program to find the shortest path in a graph using Dijkstra's algorithm.
34. Write a Python program to implement a basic calculator using classes.
35. Write a Python program to implement a decorator to measure the execution time of a function.
36. Write a Python program to generate all permutations of a string.
37. Write a Python program to implement a generator for the Fibonacci sequence.
38. Write a Python program to implement a multithreaded program to print numbers from 1 to 10.
39. Write a Python program to validate an email address using regular expressions.
40. Write a Python program to scrape data from a website using BeautifulSoup.

File Handling and Exception Handling

41. Write a Python program to read a file and count the number of lines in it.
42. Write a Python program to write a list of strings to a file.
43. Write a Python program to handle division by zero using exception handling.
44. Write a Python program to read a CSV file and print its contents.

45. Write a Python program to append data to an existing file.

Object-Oriented Programming (OOP)

46. Write a Python program to create a class `Circle` with methods to calculate area and circumference.

47. Write a Python program to create a class `BankAccount` with methods to deposit and withdraw money.

48. Write a Python program to implement inheritance using a `Vehicle` class and a `Car` subclass.

49. Write a Python program to implement method overriding in a subclass.

50. Write a Python program to implement encapsulation using private attributes in a class.

Data Structures and Algorithms

51. Write a Python program to implement a priority queue.

52. Write a Python program to implement a binary search tree.

53. Write a Python program to implement a hash table.

54. Write a Python program to implement the Tower of Hanoi problem.

55. Write a Python program to implement the Sieve of Eratosthenes algorithm to find prime numbers.

Regular Expressions

56. Write a Python program to extract all email addresses from a text.

57. Write a Python program to validate a phone number using regex.

58. Write a Python program to find all words starting with a vowel in a sentence.

59. Write a Python program to replace all occurrences of a substring in a string.

60. Write a Python program to split a string into words using regex.

Functional Programming

61. Write a Python program to use `map()` to square all elements in a list.

- 62. Write a Python program to use `filter()` to extract even numbers from a list.
 - 63. Write a Python program to use `reduce()` to find the product of all elements in a list.
 - 64. Write a Python program to create a lambda function to add two numbers.
 - 65. Write a Python program to sort a list of tuples based on the second element using a lambda function.
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Miscellaneous

- 66. Write a Python program to generate a random password.
- 67. Write a Python program to find the most frequent word in a text file.
- 68. Write a Python program to implement a basic chatbot.
- 69. Write a Python program to create a simple GUI using `tkinter`.
- 70. Write a Python program to send an email using `smtplib`.