

100 C++ Programming Questions

1. Write a program to check if a number is prime.
2. Implement a function to find the greatest common divisor (GCD) of two numbers.
3. Write a program to reverse a string without using built-in functions.
4. Create a program to calculate the factorial of a number using recursion.
5. Write a program to implement a basic calculator with addition, subtraction, multiplication, and division.
6. Implement a program to check if a number is a palindrome.
7. Create a program to find the nth Fibonacci number using recursion.
8. Write a program to swap two numbers without using a temporary variable.
9. Implement a program to count the frequency of characters in a string.
10. Write a program to check if a string is a palindrome.
11. Create a program to find the largest and smallest numbers in a list.
12. Write a program to sort a list using the bubble sort algorithm.
13. Implement a program to convert a decimal number to binary.
14. Write a program to count the number of vowels and consonants in a string.
15. Create a program to calculate the power of a number using recursion.
16. Write a program to find the sum of all digits in a number.
17. Implement a program to merge two sorted lists into one sorted

list.

- 18. Write a program to generate all permutations of a given string.**
- 19. Create a program to find the second largest element in a list.**
- 20. Write a program to find the sum of all even numbers in a range.**
- 21. Implement a program to remove duplicate characters from a string.**
- 22. Write a program to check if a number is an Armstrong number.**
- 23. Create a program to find the HCF and LCM of two numbers.**
- 24. Write a program to find the square root of a number using binary search.**
- 25. Implement a program to count the number of words in a sentence.**
- 26. Write a program to generate the first n prime numbers.**
- 27. Create a program to convert a binary number to decimal.**
- 28. Write a program to implement linear search in a list.**
- 29. Implement a program to find the intersection of two sets.**
- 30. Write a program to check if two strings are anagrams.**
- 31. Create a program to find the longest word in a sentence.**
- 32. Write a program to implement a basic stack using arrays.**
- 33. Implement a queue using linked lists in C++.**
- 34. Write a program to find the sum of the digits of a given number.**
- 35. Create a program to print Pascal's Triangle up to n rows.**
- 36. Write a program to calculate the area of a circle, rectangle, and triangle.**
- 37. Implement a program to reverse a number.**
- 38. Write a program to check if a year is a leap year.**
- 39. Create a program to perform basic string manipulations (concatenation, comparison, etc.).**

40. Write a program to calculate the sum of the first n natural numbers.
41. Implement a program to find the missing number in a sequence.
42. Write a program to generate all prime numbers in a range.
43. Create a program to implement the selection sort algorithm.
44. Write a program to implement binary search.
45. Implement a program to count the occurrences of a word in a sentence.
46. Write a program to find the length of a string without using built-in functions.
47. Create a program to find the largest prime factor of a number.
48. Write a program to convert a number from one base to another.
49. Implement a program to check if a number is perfect (equal to the sum of its divisors).
50. Write a program to find the median of a list.
51. Create a program to calculate compound interest.
52. Write a program to implement insertion sort.
53. Implement a program to find the n th term of an arithmetic sequence.
54. Write a program to check if a number is even or odd without using the modulus operator.
55. Write a program to implement quicksort.
56. Implement a program to find the longest common subsequence of two strings.
57. Write a program to find the sum of all odd numbers in a range.
58. Write a program to calculate the sum of digits of a factorial.
59. Write a program to check if a number is a power of two.

60. Write a program to calculate the binomial coefficient (nCr).
61. Write a program to reverse a sentence word by word.
62. Implement a program to check if a string contains only digits.
63. Write a program to generate the power set of a given set.
64. Write a program to implement Dijkstra algorithm.
65. Write a program to generate all combinations of balanced parentheses.
66. Create a program to find the number of trailing zeros in a factorial.
67. Write a program to simulate a basic banking system with deposit and withdrawal functionalities.
68. Write a program to find the edit distance between two strings.
69. Write a program to calculate the sum of all prime numbers in a range.
70. Write a program to implement merge sort.
71. Write a program to calculate the day of the week for a given date.
72. Implement a program to solve the Tower of Hanoi problem.
73. Write a program to implement a doubly linked list.
74. Write a program to solve the N-Queens problem.
75. Write a program to solve a system of linear equations using matrices.
76. Write a program to implement a binary tree and perform inorder traversal.
77. Write a program to find the kth smallest element in a list.
78. Write a program to find the first non-repeating character in a string.
79. Write a program to find the largest number in a list without using built-in functions.

- 80. Implement a program to solve the coin change problem.**
- 81. Write a program to print all subsets of a given set.**
- 82. Write a program to find the sum of all divisors of a number.**
- 83. Write a program to implement the flood fill algorithm.**
- 84. Write a program to implement a priority queue.**
- 85. Write a program to calculate the maximum sum of a subarray.**
- 86. Write a program to calculate the sum of the diagonal elements of a matrix.**
- 87. Write a program to implement trie for string storage and search.**
- 88. Write a program to find the sum of the first n terms of a geometric series.**
- 89. Write a program to implement a basic queue using arrays.**
- 90. Write a program to check if a string starts and ends with the same character.**
- 91. Write a program to find the longest substring without repeating characters.**
- 92. Write a program to find the second largest element in a list.**
- 93. Write a program to merge two sorted lists.**
- 94. Write a program to find the nth Fibonacci number without recursion.**
- 95. Write a program to convert a decimal number to hexadecimal.**
- 96. Write a program to reverse a string using recursion.**
- 97. Write a program to count the number of words in a sentence.**
- 98. Write a program to sort a list using selection sort.**
- 99. Write a program to convert a string to uppercase without using built-in functions.**
- 100. Write a program to calculate the greatest common divisor of**

multiple numbers.