

# 100 Basic Python Coding Problems

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 square of a number.
4. Write a Python program to swap two numbers without using a temporary variable.
5. Write a Python program to find the maximum of two numbers.
6. Write a Python program to find the factorial of a number.
7. Write a Python program to check if a number is even or odd.
8. Write a Python program to check if a number is prime.
9. Write a Python program to generate the Fibonacci sequence.
10. Write a Python program to check if a string is a palindrome.
11. Write a Python program to reverse a string.
12. Write a Python program to count the number of vowels in a string.
13. Write a Python program to find the length of a string without using the len() function.
14. Write a Python program to find the sum of digits of a number.
15. Write a Python program to check if a year is a leap year.
16. Write a Python program to convert Celsius to Fahrenheit.
17. Write a Python program to convert Fahrenheit to Celsius.
18. Write a Python program to find the largest number in a list.
19. Write a Python program to find the smallest number in a list.
20. Write a Python program to find the sum of elements in a list.
21. Write a Python program to find the product of elements in a list.
22. Write a Python program to remove duplicates from a list.
23. Write a Python program to check if a list is empty.
24. Write a Python program to merge two lists.
25. Write a Python program to find the intersection of two lists.
26. Write a Python program to find the union of two lists.

27. Write a Python program to find the difference between two lists.
28. Write a Python program to find the second largest number in a list.
29. Write a Python program to find the second smallest number in a list.
30. Write a Python program to sort a list in ascending order.
31. Write a Python program to sort a list in descending order.
32. Write a Python program to remove an element from a list by index.
33. Write a Python program to remove an element from a list by value.
34. Write a Python program to count the frequency of elements in a list.
35. Write a Python program to find the factorial of a number using recursion.
36. Write a Python program to find the greatest common divisor (GCD) of two numbers.
37. Write a Python program to find the least common multiple (LCM) of two numbers.
38. Write a Python program to find the power of a number using recursion.
39. Write a Python program to find the sum of elements in a matrix.
40. Write a Python program to transpose a matrix.
41. Write a Python program to find the sum of the diagonal elements of a matrix.
42. Write a Python program to remove a specified column from a matrix.
43. Write a Python program to check if a matrix is a square matrix.
44. Write a Python program to find the determinant of a matrix.
45. Write a Python program to find the inverse of a matrix.
46. Write a Python program to multiply two matrices.
47. Write a Python program to find the mode of a list of numbers.
48. Write a Python program to find the median of a list of numbers.
49. Write a Python program to calculate the standard deviation of a list of numbers.
50. Write a Python program to find the n-th Fibonacci number using recursion.
51. Write a Python program to find the sum of all prime numbers up to a given number.
52. Write a Python program to convert a decimal number to binary.
53. Write a Python program to convert a decimal number to hexadecimal.

54. Write a Python program to convert a binary number to decimal.
55. Write a Python program to convert a hexadecimal number to decimal.
56. Write a Python program to find the ASCII value of a character.
57. Write a Python program to find the HCF of two numbers using recursion.
58. Write a Python program to find the LCM of two numbers using recursion.
59. Write a Python program to count the number of uppercase and lowercase letters in a string.
60. Write a Python program to remove all punctuations from a string.
61. Write a Python program to check if two strings are anagrams.
62. Write a Python program to remove whitespace from a string.
63. Write a Python program to calculate the area of a circle.
64. Write a Python program to calculate the area of a rectangle.
65. Write a Python program to calculate the area of a triangle.
66. Write a Python program to calculate the perimeter of a square.
67. Write a Python program to find the cube of a number.
68. Write a Python program to find the average of numbers in a list.
69. Write a Python program to find the sum of the first n natural numbers.
70. Write a Python program to find the sum of squares of the first n natural numbers.
71. Write a Python program to find the sum of cubes of the first n natural numbers.
72. Write a Python program to calculate the compound interest.
73. Write a Python program to calculate the simple interest.
74. Write a Python program to check if a number is a perfect square.
75. Write a Python program to check if a number is a perfect cube.
76. Write a Python program to find the sum of even numbers in a list.
77. Write a Python program to find the sum of odd numbers in a list.
78. Write a Python program to count the number of prime numbers in a list.
79. Write a Python program to check if a number is an Armstrong number.
80. Write a Python program to check if a number is a palindrome.

81. Write a Python program to find the sum of the digits of a number.
82. Write a Python program to reverse the digits of a number.
83. Write a Python program to find the second most frequent character in a string.
84. Write a Python program to find the first non-repeating character in a string.
85. Write a Python program to remove all vowels from a string.
86. Write a Python program to count the number of consonants in a string.
87. Write a Python program to check if a number is divisible by another number.
88. Write a Python program to check if a string is a valid identifier.
89. Write a Python program to check if a number is a power of two.
90. Write a Python program to check if a number is a power of three.
91. Write a Python program to find the common elements in three lists.
92. Write a Python program to find the symmetric difference between two lists.
93. Write a Python program to convert a string to uppercase without using the upper() function.
94. Write a Python program to convert a string to lowercase without using the lower() function.
95. Write a Python program to find the length of the longest word in a string.
96. Write a Python program to count the number of words in a string.
97. Write a Python program to capitalize the first letter of each word in a string.
98. Write a Python program to find the sum of all numbers in a string.
99. Write a Python program to check if a string contains only digits.
100. Write a Python program to replace all occurrences of a substring in a string.