100 Python Coding Questions for Startup Job Prep

1. 1. Reverse a string without using slicing.
2. 2. Check if a string is a palindrome.
3. 3. Remove all vowels from a string.
4. 4. Count the frequency of characters in a string.
5. 5. Find the first non-repeating character.
6. 6. Find the second largest number in a list.
7. 7. Remove duplicates from a list.
8. 8. Find the pair of numbers that sum to a target.
9. 9. Rotate a list to the right by k steps.
10. 10. Find the max product of two elements in a list.
11. 11. Count the frequency of elements in a list using a dictionary.
12. 12. Group words with the same set of characters (Anagrams).
13. 13. Merge two dictionaries and handle key conflicts.
14. 14. Convert a list of tuples into a dictionary.
15. 15. Simulate a basic login system (username/password check).
16. 16. Build a mini to-do list using list and dictionary.
17. 17. Create a function to validate email and password format.
18. 18. Write a function to track inventory with add/remove items.
19. 19. Simulate a bank account (deposit, withdraw, balance).
20. 20. Build a simple contact book: add, search, update, delete contacts.
21. 21. Find the longest word in a sentence.
22. 22. Replace all spaces in a string with '%20'.
23. 23. Check if two strings are anagrams.
24. 24. Count vowels and consonants in a string.
25. 25. Find common elements in two lists.

26. 26. Merge two sorted lists into one sorted list.
27. 27. Move all zeros to the end of a list.
28. 28. Find missing number in a list of 1 to n.
29. 29. Find the majority element in a list.
30. 30. Calculate the sum of all even numbers in a list.
31. 31. Flatten a nested list.
32. 32. Find the longest increasing subsequence.
33. 33. Implement binary search.
34. 34. Find the first and last occurrence of an element.
35. 35. Count number of words in a string.
36. 36. Remove punctuation from a string.
37. 37. Check if a sentence is a pangram.
38. 38. Capitalize the first letter of each word.
39. 39. Check if two lists are equal.
40. 40. Generate a random password.
41. 41. Find the intersection of two sets.
42. 42. Count unique words in a paragraph.
43. 43. Find GCD and LCM of two numbers.
44. 44. Convert decimal to binary.
45. 45. Check if a number is prime.
46. 46. Print prime numbers in a given range.
47. 47. Find factorial of a number using recursion.
48. 48. Fibonacci sequence using memoization.
49. 49. Check if a number is a perfect square.
50. 50. Find the nth largest number in a list.
51. 51. Find duplicates in a list.
52. 52. Print a multiplication table for a number.

53. 53. Find min and max in a list without using min()/max().
54. 54. Calculate the average of a list.
55. 55. Print numbers divisible by 3 or 5.
56. 56. Replace all negative numbers in a list with zero.
57. 57. Find the longest common prefix among a list of strings.
58. 58. Sort a list of tuples by the second value.
59. 59. Implement bubble sort.
60. 60. Implement selection sort.
61. 61. Implement insertion sort.
62. 62. Find missing characters to make a password strong.
63. 63. Replace each character with its ASCII value.
64. 64. Find the longest palindrome in a string.
65. 65. Implement stack using list.
66. 66. Implement queue using deque.
67. 67. Check for balanced parentheses.
68. 68. Count the number of set bits in a binary number.
69. 69. Implement a basic calculator for +, -, *, /.
70. 70. Create a CLI shopping cart system.
71. 71. Display current date and time in formatted way.
72. 72. Implement custom exception handling.
73. 73. Create a Python decorator to time a function.
74. 74. Count frequency of words in a file.
75. 75. Remove stopwords from a given text.
76. 76. Extract email IDs from a text.
77. 77. Validate a phone number.
78. 78. Read and write to a JSON file.
79. 79. Find the most common word in a text file.

80. 80. Create a digital clock using tkinter.

81. 81. Implement a progress bar using time module.

82. 82. Build a mini quiz game in console.

83. 83. Store student marks in a nested dictionary.

84. 84. Calculate grade based on average marks.

85. 85. Sort dictionary by value.

86. 86. Implement pagination logic for a list.

87. 87. Scrape titles from a web page using BeautifulSoup.

88. 88. Build a simple BMI calculator.

89. 89. Create a stopwatch using time module.

90. 90. Generate a list of random numbers and sort them.

91. 91. Create a list of squares using list comprehension.

92. 92. Convert a string into title case.

93. 93. Simulate a basic ATM interface.

94. 94. Build a file renamer tool.

95. 95. Create a function to compress strings (basic RLE).

96. 96. Count lines, words, and characters in a file.

97. 97. Implement Caesar Cipher encryption.

98. 98. Decode a Caesar Cipher encrypted text.

99. 99. Build a command-line calculator.

100. 100. Generate prime numbers using the Sieve of Eratosthenes.