150+ Widely asked Python coding Interview question

Here's an extended list of 170+ Python interview coding questions, focusing on strings, lists, dictionaries, sets, if-else statements, loops, and intermediate problems on those topics.

Basic Level

Strings

1. Write a program to check if a string is a palindrome.

2. Write a program to count the number of vowels and consonants in a string.

3. Write a program to reverse a string.

4. Write a program to count the number of words in a string.

5. Check if a string contains only digits.

6. Write a program to remove all whitespaces from a string.

7. Write a program to check if a string is an anagram of another string.

8. Write a program to count the occurrences of a character in a string.

9. Write a program to find the length of a string without using the `len()` function.

10. Convert a string to uppercase and lowercase.

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

12. Write a program to find the index of the first occurrence of a substring.

13. Write a program to capitalize the first letter of each word in a string.

14. Check if a string starts with a specific prefix.

15. Write a program to find the longest word in a string.

16. Write a program to check if two strings are rotations of each other.

17. Write a program to remove duplicate characters from a string.

18. Write a program to reverse the order of words in a string.

19. Write a program to count the frequency of each character in a string.

20. Write a program to convert a string to a list of characters.

Lists

21. Write a program to find the maximum and minimum elements in a list.

22. Write a program to reverse a list without using built-in functions.

23. Write a program to sort a list of numbers.

24. Write a program to remove duplicates from a list.

25. Write a program to count the occurrences of an element in a list.

26. Write a program to find the sum of all elements in a list.

27. Write a program to find the second largest number in a list.

28. Write a program to merge two sorted lists.

29. Write a program to check if a list is empty.

30. Write a program to concatenate two lists.

31. Write a program to check if an element exists in a list.

32. Write a program to split a list into even and odd numbers.

33. Write a program to find the product of elements in a list.

34. Write a program to count the number of even and odd numbers in a list.

35. Write a program to flatten a nested list.

36. Write a program to rotate a list by a specified number of positions.

37. Write a program to remove all occurrences of a value from a list.

38. Write a program to find the common elements between two lists.

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39. Write a program to split a list into two halves.

40. Write a program to find the cumulative sum of elements in a list.

41. Write a program to find the intersection of two lists.

42. Write a program to find the union of two lists.

43. Write a program to check if two lists are identical.

44. Write a program to convert a list of characters into a string.

45. Write a program to multiply all elements in a list by a given number.

🔸Dictionaries

46. Write a program to create a dictionary from two lists (keys and values).

47. Write a program to access a value by key in a dictionary.

48. Write a program to update the value of a key in a dictionary.

49. Write a program to remove a key from a dictionary.

50. Write a program to merge two dictionaries.

51. Write a program to find the maximum and minimum value in a dictionary.

52. Write a program to count the frequency of each word in a string using a dictionary.

53. Write a program to check if a key exists in a dictionary.

54. Write a program to iterate over dictionary keys and values.

55. Write a program to invert a dictionary (swap keys and values).

56. Write a program to get a list of all keys and values in a dictionary.

57. Write a program to sort a dictionary by its keys.

58. Write a program to find common keys between two dictionaries.

59. Write a program to calculate the sum of values in a dictionary.

60. Write a program to remove all duplicate values from a dictionary.

61. Write a program to get the key with the maximum value in a dictionary.

62. Write a program to filter dictionary entries based on their values.

63. Write a program to find keys in a dictionary that have a specific value.

64. Write a program to group elements in a list by frequency using a dictionary.

65. Write a program to sort a dictionary by its values.

Sets

66. Write a program to create a set and add elements to it.

67. Write a program to remove an element from a set.

68. Write a program to find the union of two sets.

69. Write a program to find the intersection of two sets.

70. Write a program to check if a set is a subset of another set.

71. Write a program to find the difference between two sets.

72. Write a program to iterate over the elements of a set.

73. Write a program to convert a list into a set and remove duplicates.

74. Write a program to find the symmetric difference of two sets.

75. Write a program to check if two sets have any common elements.

76. Write a program to check if a set is a superset of another set.

77. Write a program to check if a set is disjoint from another set.

78. Write a program to remove all elements from a set.

79. Write a program to find the smallest and largest elements in a set.

80. Write a program to find the length of a set without using the `len()` function.

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🔆 If-Else Statements

81. Write a program to check if a number is positive, negative, or zero.

82. Write a program to check if a number is odd or even.

83. Write a program to check if a year is a leap year.

84. Write a program to find the largest of three numbers.

85. Write a program to check if a string contains a vowel.

86. Write a program to check if a list is empty or not.

87. Write a program to check if a number is divisible by both 3 and 5.

88. Write a program to check if a number is prime.

89. Write a program to print "Hello" if the input number is greater than 10, else print "Goodbye".

90. Write a program to check if the first and last elements of a list are the same.

91. Write a program to determine the grade based on a student's score.

92. Write a program to check if a string contains only alphabetic characters.

93. Write a program to check if two lists are identical.

94. Write a program to check if a dictionary is empty.

95. Write a program to determine if a number is divisible by a specific number.

🔆 Loops

96. Write a program to print the first 10 natural numbers using a loop.

97. Write a program to find the factorial of a number using a loop.

98. Write a program to print the Fibonacci sequence up to n terms using a loop.

99. Write a program to calculate the sum of all elements in a list using a loop.

100. Write a program to count the number of even numbers in a list using a loop.

101. Write a program to print all prime numbers between 1 and 100 using a loop.

102. Write a program to print the multiplication table of a given number using a loop.

103. Write a program to find the reverse of a number using a loop.

104. Write a program to count the number of digits in a number using a loop.

105. Write a program to find the sum of digits of a number using a loop.

106. Write a program to reverse a list using a loop.

107. Write a program to check if a number is prime using a loop.

108. Write a program to print all even numbers from 1 to 100 using a loop.

109. Write a program to calculate the product of all elements in a list using a loop.

110. Write a program to find the GCD (Greatest Common Divisor) of two numbers using a loop.

111. Write a program to print all the characters in a string using a loop.

112. Write a program to print the sum of all even numbers up to n using a loop

113. Write a program to print the sum of all odd numbers up to n using a loop.

114. Write a program to find the factorial of a number using a while loop.

115. Write a program to calculate the sum of the squares of the first n natural numbers using a loop.

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![] Intermediate String Problems

116. Write a program to check if a string is a valid palindrome (ignoring spaces and case).

117. Write a program to find the longest substring without repeating characters.

118. Write a program to count the frequency of each character in a string.

119. Write a program to find the first non-repeating character in a string.

120. Write a program to reverse the words in a given sentence.

121. Write a program to find the longest word in a sentence.

122. Write a program to split a string by a specific delimiter and join it back.

123. Write a program to find the number of uppercase and lowercase letters in a string.

124. Write a program to find all substrings of a given string.

125. Write a program to remove duplicate characters from a string.

126. Write a program to find all possible permutations of a string.

127. Write a program to find the longest palindromic substring in a given string.

128. Write a program to check if a string contains only alphanumeric characters.

129. Write a program to remove all characters from a string except alphabets.

130. Write a program to check if a string is a valid email address.

![] Intermediate List Problems

131. Write a program to rotate elements of a list by k positions.

132. Write a program to find the cumulative sum of elements in a list.

133. Write a program to find the intersection of two lists.

134. Write a program to find all pairs in a list that sum up to a specific number.

135. Write a program to remove all occurrences of a specific element from a list.

136. Write a program to split a list into chunks of size n.

137. Write a program to flatten a list of lists into a single list.

138. Write a program to find the most frequent element in a list.

139. Write a program to find the k largest elements in a list.

140. Write a program to sort a list of tuples based on the second element.

141. Write a program to find all permutations of a list.

142. Write a program to sort a list of dictionaries by a key.

143. Write a program to find the median of a list of numbers.

144. Write a program to count the number of unique elements in a list.

145. Write a program to find the longest increasing subsequence in a list.

Intermediate Dictionary Problems

146. Write a program to merge multiple dictionaries into one.

147. Write a program to count the frequency of elements in a list using a dictionary.

148. Write a program to group elements of a list based on the frequency in a dictionary.

149. Write a program to find the key with the maximum value in a dictionary.

150. Write a program to sort a dictionary by its values.

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🔆 Intermediate Loop Questions

151. Write a program to find all the duplicate characters in a string.

152. Write a program to generate a list of all unique substrings of a given string.

153. Write a program to count the number of occurrences of each word in a list of strings.

154. Write a program to sort a list of strings by their lengths.

155. Write a program to merge two lists into a single list, alternating elements from each list.

156. Write a program to find the most frequent element in a list of integers.

157. Write a program to find all anagrams of a given word from a list of words.

158. Write a program to remove all non-alphabetic characters from a string.

159. Write a program to find the sum of the lengths of all strings in a list.

160. Write a program to count the number of palindromic substrings in a given string.

161. Write a program to find the common characters between two strings.

162. Write a program to generate all combinations of characters from a given string.

163. Write a program to find all pairs of elements in a list that sum up to a specific target value.

164. Write a program to replace all occurrences of a character in a string with another character.

165. Write a program to find the number of unique words in a list of strings.

166. Write a program to remove all occurrences of a specific word from a list of words.

167. Write a program to count the number of vowels in each string in a list of strings.

168. Write a program to find the index of the last occurrence of a substring in a given string.

169. Write a program to split a list into two sublists of roughly equal size.

170. Write a program to generate a list of all permutations of a given list of integers.

171. Write a program to find the longest common prefix among a list of strings.

172. Write a program to count the total number of characters in all strings of a list.

173. Write a program to find the average length of strings in a list.

This extended list should give you a comprehensive set of interview questions, covering key Python concepts and scenarios asked in interviews focused on strings, lists, dictionaries, sets, if-else conditions, and loops.