Questions for introductory Python programming

1. Hello World

Write a Python program to print "Anything You find cool."

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2. Add Numbers and Concatenate Strings

2.1 Write a program to add two numbers and print the result.

2.2 Write a program to concatenate two strings and print the result.

2.3 Write a program to concatenate a string and a number and print the result.

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3. If-Else Statements

3.1 Write a Python program to check if a number is positive, negative, or zero using an `if-else` statement.

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

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4. Loops

4.1 Write a program to print numbers from 1 to 10 using a `for` loop.

4.2 Write a program to print numbers from 1 to 10 using a `while` loop.

4.3 Write a program to calculate the sum of numbers from 1 to 100 using a loop.

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5. Data Structures

5.1 Create a list of 5 numbers. Write a program to find the largest and smallest numbers in the list.

5.2 Create a dictionary with at least 3 key-value pairs. Write a program to retrieve the value of a given key.

5.3 Write a program to sort a list of numbers in ascending and descending order.

5.4 Write a program to merge two dictionaries into one.

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6. Strings

6.1 Write a program to count the number of vowels in a given string.

6.2 Write a program to reverse a string and print it.

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

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7. File Handling

7.1 Write a program to create a text file, write some text into it, and then read and print the content.

7.2 Write a program to append text to an existing file and print the updated content.

7.3 Write a program to count the number of lines in a text file.

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8. Exception Handling

8.1 Write a program to handle division by zero using a `try-except` block.

8.2 Write a program to handle invalid input (e.g., when the user enters a string instead of a number).

8.3 Write a program to demonstrate the use of `finally` in exception handling.

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9. Random Numbers

9.1 Write a program to generate 5 random numbers between 1 and 100 and print them.

9.2 Write a program to generate a random number and check if it is prime.

9.3 Write a program to simulate rolling a six-sided die.

9.4 Write a program to shuffle a list of numbers.

9.5 Write a program to randomly select an item from a list.

9.6 Write a program to generate a random password of given length.

9.7 Write a program to pick a random card from a standard deck of 52 cards.

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10. Command Line Arguments

10.1 Write a program to accept two numbers as command-line arguments, add them, and print the result.

10.2 Write a program to accept a string as a command-line argument and print its length.

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11. Use of Libraries

11.1 Write a program to use the `math` library to calculate the square root of a given number.

11.2 Write a program to use the `datetime` library to print the current date and time.

11.3 Write a program to use the `os` library to list all files in the current directory.