Python Masterclass-2 Assignment

1. Write a Python program that prompts the user to enter a value and determines its data type. Print a message indicating the data type of the entered value.

Hint:

Use the input() function to prompt the user to enter a value and store it in a variable.

Use the type() function to determine the data type of the entered value.

Print a message indicating the data type of the value using the print() function.

2. Write a Python program that prompts the user to enter a string and performs the following operations:

Print the length of the string.

Convert the string to uppercase and print the result.

Check if the string contains only alphabetic characters and print the result (True or False).

Hint:

Use the input() function to prompt the user to enter a string and store it in a variable.

Use the len() function to find the length of the string and print the result.

Use the upper() function to convert the string to uppercase and print the result.

Use the isalpha() function to check if the string contains only alphabetic characters and print the result (True or False).

3. Write a Python program that prompts the user to enter two numbers and performs the following operations:

Print the sum of the two numbers.

Print the difference between the two numbers.

Print the product of the two numbers.

Print the result of dividing the first number by the second number.

Hint:

Use the input() function to prompt the user to enter two numbers and store them in variables.

Convert the user input from strings to integers or floats using int() or float() functions.

Perform the addition, subtraction, multiplication, and division operations on the numbers.

Print the results using the print() function.

Python Masterclass-2 Assignment

4. Write a Python program that demonstrates various list manipulation operations, such as:

Appending elements to a list.

Removing elements from a list.

Accessing elements by index.

Slicing a list to extract a sublist.

Sorting the elements of a list in ascending order

Hint:

Start with an empty list or create a list with some initial elements.

Use the append() function to add elements to the list.

Use the remove() function to remove specific elements from the list.

Use indexing to access elements at a particular index in the list.

Use slicing to extract a sublist from the original list.

Use the sort() function to sort the elements of the list in ascending order.

5. Write a Python program that prompts the user to enter two tuples and performs the following operations:

Concatenate the two tuples and print the result.

Check if a specific element exists in either of the tuples and print the result (True or False).

Hint:

Use the input() function to prompt the user to enter two tuples and store them in variables.

Use the + operator to concatenate the two tuples into a single tuple.

Prompt the user to enter a specific element to check for its existence in the tuples.

Use the in operator to check if the specific element exists in either of the tuples and store the result in a variable.

Print the concatenated tuple and the result of the existence check.