Practice Problem 1.1

practice_problem1.py - S:\Virtual Internship\Task-2\practice_problem1.py (3.9.13)

File Edit Format Run Options Window Help

```python
 # Create three variables of different types
integer_var = 10
float_var = 5.51
string_var = "Myself Md Aminul Islam Sayem!"

# Print the original variables
print("Integer variable:", integer_var)
print("Float variable:", float_var)
print("String variable:", string_var)

# Combine the variables into a single string
combined_string = f"Integer: {integer_var}, Float: {float_var}, String: '{string_var}'"

# Print the combined string
print("Combined String:", combined_string)
```

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: S:\Virtual Internship\Task-2\practice_problem1.py ==========
Integer variable: 10
Float variable: 5.51
String variable: Myself Md Aminul Islam Sayem!
Combined String: Integer: 10, Float: 5.51, String: 'Myself Md Aminul Islam Sayem!'
>>>
```

Practice Problem 1.2

practice_problem_1_2.py - S:/Virtual Internship/Task-2/practice_problem_1_2.py (3.9.13)

File Edit Format Run Options Window Help

```python
# Define the list
numbers = [10, 0, 55, 88, 100, -56, 80]

# Initialize a variable to store the largest number
largest = numbers[0]  # Start with the first number in the list

# Iterate through the list to find the largest number
for number in numbers:
    if number > largest:
        largest = number

# Print the largest number
print("The largest number in the list is:", largest)
```

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: S:/Virtual Internship/Task-2/practice_problem_1_2.py ========
The largest number in the list is: 100
>>> |
```

Practice Problem 1.3

practice_problem_1_3.py - S:\Virtual Internship\Task-2\practice_problem_1_3.py (3.9.13)

File Edit Format Run Options Window Help

```python
# Define the sentence
rima_sentence = "Your daughter is very pretty"

# Create an empty string to store the result
unique_chars = ""

# Iterate through each character in the sentence
for char in rima_sentence:
    # Check if the character is not already in the unique_chars string
    if char not in unique_chars:
        unique_chars += char

# Print the sentence with duplicate characters removed
print("Rima's sentence without duplicate characters:", unique_chars)
```

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: S:\Virtual Internship\Task-2\practice_problem_1_3.py ========
Rima's sentence without duplicate characters: Your daghteisvyp
>>>
```

Practice Problem 1.4

practice_problem_1_4.py - S:/Virtual Internship/Task-2/practice_problem_1_4.py (3.9.13)

File Edit Format Run Options Window Help

```python
# Define the sample list of strings
string_list = ['abc', 'xyz', 'aba', '1221']

# Initialize a variable to count matching strings
count = 0

# Iterate through the list of strings
for s in string_list:
    # Check if the string has a length of 2 or more and the first and last characters are the sam
    if len(s) >= 2 and s[0] == s[-1]:
        count += 1

# Print the count of matching strings
print("Number of strings meeting the criteria:", count)
```

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: S:/Virtual Internship/Task-2/practice_problem_1_4.py ========
Number of strings meeting the criteria: 2
>>>
```

Practice Problem 1.5

practice_problem_1_5.py - S:/Virtual Internship/Task-2/practice_problem_1_5.py (3.9.13)

File Edit Format Run Options Window Help

```python
def count_upper_lower(string):
    # Initialize variables to count uppercase and lowercase letters
    upper_count = 0
    lower_count = 0

    # Iterate through each character in the input string
    for char in string:
        if char.isupper():
            upper_count += 1
        elif char.islower():
            lower_count += 1

    # Return the counts as a tuple
    return upper_count, lower_count

# Sample input string
input_string = "Bangladesh has played 396 ODI matches resulting in 142 victories"

# Call the function with the input string
upper, lower = count_upper_lower(input_string)

# Print the results
print("No. of Upper case characters:", upper)
print("No. of Lower case Characters:", lower)
```

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: S:/Virtual Internship/Task-2/practice_problem_1_5.py ========
No. of Upper case characters: 4
No. of Lower case Characters: 45
>>> |
```

Practice Problem 1.6

practice_problem_1_6.py - S:/Virtual Internship/Task-2/practice_problem_1_6.py (3.9.13)

File Edit Format Run Options Window Help

```python
# Accept a comma-separated sequence of words as input
input_sequence = input("Enter a comma-separated sequence of words: ")

# Split the input into words using the comma as the separator
words = input_sequence.split(',')

# Convert the list of words into a set to remove duplicates
unique_words = set(words)

# Convert the set back to a sorted list
sorted_unique_words = sorted(unique_words)

# Join the sorted words into a single string
result = ', '.join(sorted_unique_words)

# Print the result
print("Unique words in sorted form:", result)
```

Ln: 18 Col:

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: S:/Virtual Internship/Task-2/practice_problem_1_6.py ========
Enter a comma-separated sequence of words: Hello,myself,Sayem
Unique words in sorted form: Hello, Sayem, myself
>>>
```

Practice Problem 1.7

practice_problem_1_7.py - S:/Virtual Internship/Task-2/practice_problem_1_7.py (3.9.13)

File Edit Format Run Options Window Help

```python
# Sample string
sample_string = "thequickbrownfoxjumpsoverthelazydog"

# Initialize a dictionary to store character counts
char_count = {}

# Iterate through the string
for char in sample_string:
    # If the character is already in the dictionary, increment its count
    if char in char_count:
        char_count[char] += 1
    # If the character is not in the dictionary, add it with a count of 1
    else:
        char_count[char] = 1

# Iterate through the dictionary and print character counts
for char, count in char_count.items():
    if count > 1:
        print(f"{char} {count}")
```

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: S:/Virtual Internship/Task-2/practice_problem_1_7.py ========
t 2
h 2
e 3
u 2
r 2
o 4
>>>
```

Practice Problem 1.8

practice_problem_1_8.py - S:/Virtual Internship/Task-2/practice_problem_1_8.py (3.9.13)

File Edit Format Run Options Window Help

```python
# Define a list to store the extracted text from files
text_list = []

# List of file names
file_names = ['words1.txt', 'words2.txt']

# Iterate through each file
for file_name in file_names:
    try:
        # Open and read the file
        with open(file_name, 'r') as file:
            text = file.read()
            text_list.append(text)
    except FileNotFoundError:
        print(f"File '{file_name}' not found. Skipping...")

# Print the list of extracted text
for i, text in enumerate(text_list, start=1):
    print(f"Text from file {i}:\n{text}\n")
```

Ln: 20 Col:

IDLE Shell 3.9.13

File Edit Shell Debug Options Window Help

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: S:/Virtual Internship/Task-2/practice_problem_1_8.py ========
Text from file 1:
Welcome to the Python Wiki, a user-editable compendium of knowledge based around the Python programming language. So
me pages are protected against casual editing - see WikiEditingGuidelines for more information about editing content
.

Text from file 2:
Python is a great object-oriented, interpreted, and interactive programming language. It is often compared (favorabl
y of course :-) ) to Lisp, Tcl, Perl, Ruby, C#, Visual Basic, Visual Fox Pro, Scheme or Java...and it's much more fu
n.
```