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تالئة حاسب

1) Write a Python program which accepts the radius of a circle from the user and compute the area.

Solution :

```

1 pi = 3.14
2 r = float(input("Enter radius of a circle : "))
3 area = r*r*pi
4 print("=> the area = ", area)
5

```

```

PS D:\?? \????\????? \sec AI\sec 1\task> d:; cd 'd:\?? \????\????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\adapter\..\debugpy\launcher' '8349' '--' 'D:\?? \????\????? \sec AI\sec 1\task\area.py'
Enter radius of a circle : 5
=> the area = 78.5
PS D:\?? \????\????? \sec AI\sec 1\task>

```

2) Write a Python program to calculate the sum of three given numbers, if the values are equal then return thrice of their sum

Solution:

```

1 """ Task 2
2 Write a Python program to calculate the sum of three given numbers,
3 if the values are equal then return thrice of their sum."""
4 from numpy import *
5 num1 = float(input("Enter number 1 = "))
6 num2 = float(input("Enter number 2 = "))
7 num3 = float(input("Enter number 3 = "))
8 sum = sum([num1, num2, num3])
9 if(num1 == num2 == num3):
10     print(3*sum)
11 else:
12     print(sum)
13

```

```

PS D:\?? \????\????? \sec AI\sec 1\task> d:; cd 'd:\?? \????\????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\adapter\..\debugpy\launcher' '8488' '--' 'D:\?? \????\????? \sec AI\sec 1\task\Task 2.py'
Enter number 1 = 1
Enter number 2 = 2
Enter number 3 = 3
6.0
PS D:\?? \????\????? \sec AI\sec 1\task> d:; cd 'd:\?? \????\????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\adapter\..\debugpy\launcher' '8419' '--' 'D:\?? \????\????? \sec AI\sec 1\task\Task 2.py'
Enter number 1 = 2
Enter number 2 = 2
Enter number 3 = 2
18.0
PS D:\?? \????\????? \sec AI\sec 1\task>

```

3) Write a Python program to get a string which is n (non-negative integer) copies of a given string.

Solution :

```

1  """ task 3
2  Write a Python program to get a string which is n
3  (non-negative integer) copies of a given string.
4  """
5  def repeat_string(s, n):
6      return ((s + " ") * n)
7  input_string = input("Enter the string: ")
8
9  copies = int(input("Enter the number of copies: "))
10
11 result = repeat_string(input_string, copies)
12 if copies > 0 :
13     print("Result:", result)
14 else:
15     print("Enter number of copies positive")
16
17

```

```

PS D:\sec AI\sec AI\sec 1\task> d:; cd 'd:\?? \???? \???? \???? \???? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\adapter\..\..\debugpy\launcher' '8464' '--' 'D:\?? \???? \???? \???? \???? \sec AI\sec 1\task\task 3 .py'
Enter the string: Abdo
Enter the number of copies: 5
Result: Abdo Abdo Abdo Abdo Abdo
PS D:\sec AI\sec AI\sec 1\task>

```

4) Write a Python program to find whether a given number (accept from the user) is even or odd, print out an appropriate message to the user.

Solution :

```

1  """
2  task 4 :
3  Write a Python program to find whether a given number (accept from the user)
4  is even or odd, print out an appropriate message to the user.
5  """
6
7  num = int(input("Enter the number : "))
8
9  if (num%2==0):
10     print(f"the { num } is even")
11 else:
12     print(f"the {num } is odd")
13
14

```

```

PS D:\sec AI\sec AI\sec 1\task> d:; cd 'd:\?? \???? \???? \???? \???? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\adapter\..\..\debugpy\launcher' '8523' '--' 'D:\?? \???? \???? \???? \???? \sec AI\sec 1\task\task 4.py'
Enter the number : 12
the 12 is even
PS D:\sec AI\sec AI\sec 1\task> d:; cd 'd:\?? \???? \???? \???? \???? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundle\libs\debugpy\adapter\..\..\debugpy\launcher' '8531' '--' 'D:\?? \???? \???? \???? \???? \sec AI\sec 1\task\task 4.py'
Enter the number : 13
the 13 is odd
PS D:\sec AI\sec AI\sec 1\task>

```

5) Write a Python program to test whether a passed letter is a vowel or not.

Solution :

```

1 #task 5: Write a Python program to test whether a passed letter is a vowel or not.
2 vowels = "aAeEiIoOuU"
3
4 letter = input("Enter the char : ")
5
6 if (letter.isalpha() and len(letter) == 1):
7     if (letter in vowels):
8         print(f"the {letter} is a vowel")
9     else:
10        print(f"the {letter} not vowel")
11 else:
12    print("Enter one char not digit number")
13

```

Terminal Output:

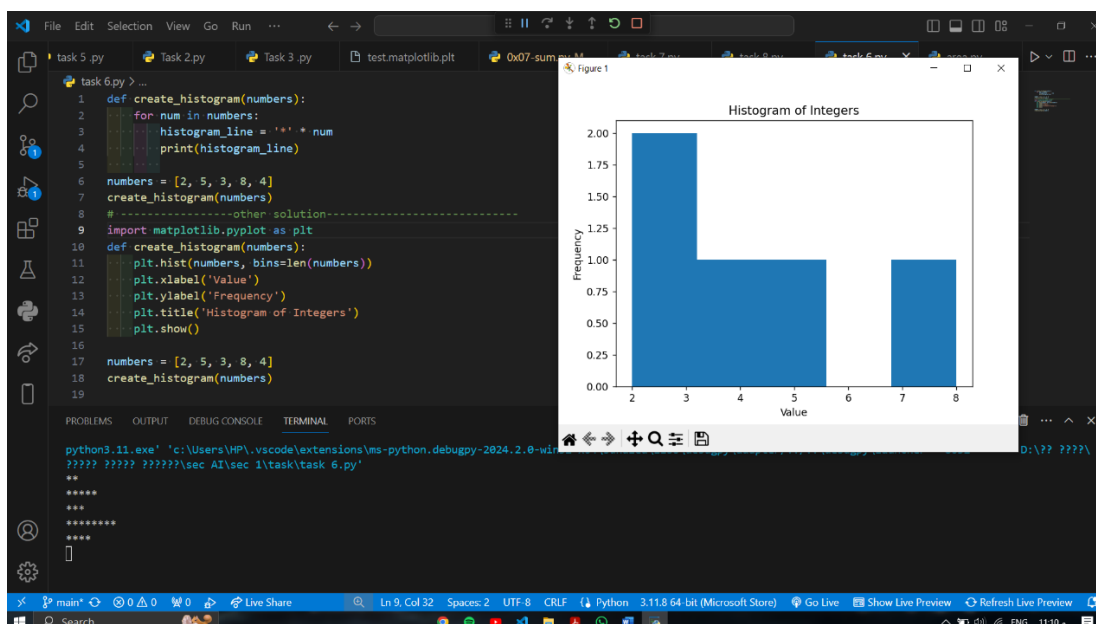
```

PS D:\...> d; cd 'd:\?? \????\????? \????? \????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '8596' '--' 'D:\?? \????\????? \????? \????? \sec AI\sec 1\task\task 5 .py'
Enter the char : p
the p not vowel
PS D:\...> d; cd 'd:\?? \????\????? \????? \????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '8603' '--' 'D:\?? \????\????? \????? \????? \sec AI\sec 1\task\task 5 .py'
Enter the char : o
the o is a vowel
PS D:\...> d; cd 'd:\?? \????\????? \????? \????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '8611' '--' 'D:\?? \????\????? \????? \????? \sec AI\sec 1\task\task 5 .py'
Enter the char : 4
Enter one char not digit number
PS D:\...>

```

6) Write a Python program to create a histogram from a given list of integers.

Solution :



7) Write a Python program to sum of three given integers. However, if two values are equal sum will be zero.

Solution :

```

1 #task 7 : Write a Python program to sum of three given integers. However, if two values are equal sum will be zero.
2 from numpy import *
3 num1 = float(input("Enter number 1 = "))
4 num2 = float(input("Enter number 2 = "))
5 num3 = float(input("Enter number 3 = "))
6
7 if num1 == num2 or num1==num3 or num2==num3:
8     sum=0
9     print("sum = ",sum)
10 else:
11     sum = sum([num1,num2,num3])
12     print("sum = ",sum)
  
```

```

PS D:\...> d:; cd 'd:\?? \????\????? \????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '8667' '--' 'D:\?? \????\????? \????? \sec AI\sec 1\task\task 7.py'
Enter number 1 = 1
Enter number 2 = 2
Enter number 3 = 3
sum = 6.0

PS D:\...> d:; cd 'd:\?? \????\????? \????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '8676' '--' 'D:\?? \????\????? \????? \sec AI\sec 1\task\task 7.py'
Enter number 1 = 1
Enter number 2 = 2
Enter number 3 = 1
sum = 0
  
```

8) Write a Python program to count the number of characters (character frequency) in a string.

Solution :

```

1 #task 8: Write a Python program to count the number of characters (character frequency) in a string.
2 string = input("Enter string : ")
3 char = input("Char: ")
4 f = string.count(char)
5 print(f)
  
```

```

PS D:\...> d:; cd 'd:\?? \????\????? \????? \sec AI\sec 1\task'; & 'c:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.11.exe' 'c:\Users\HP\.vscode\extensions\ms-python.debugpy-2024.2.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '8777' '--' 'D:\?? \????\????? \????? \sec AI\sec 1\task\task 8.py'
Enter string : hello world
Char: l
...
3
PS D:\...>
  
```