Python Assignment -1

[6]:

*#1)Display “Hello World” in your output screen.*

print("hello world")

hello world

[7]:

*#2)Get the input from the user and perform addition of two numbers*

a=int(input("enter the value of a")) b=int(input("enter the value of b")) c=a+b

print(c)

[10]:

*#3)swap two variables without temp variable*

a=int(input("enter the value of a:")) b=int(input("enter the value of b:")) a=a+b

a=a-b b=a+b

print("the value of a is",a) print("the value of b is",b)

enter the value of a2 enter the value of b3 5

[17]:

enter the value of a:2 enter the value of b:4 the value of a is 2 the value of b is 6

*#4)convert the entered kilometres ( Convertion Factor= 0.621371)*

kilometer=int(input("enter the kilometer")) conversionfactor=0.621371 a=kilometer\*conversionfactor

print(a)

[24]:

*#5)check whether the given number is positive, negative or 0*

a=int(input("enter the value of a"))

**if** a>0:

print("positive")

**elif** a==0:

print("negative")

**else**:

print("zero")

enter the kilometer4 2.485484

[29]:

enter the value of a6 positive

*#6)verify that the given year is a leap year*

year=int(input("enter the year"))

**if** (year%4==0)**and**(year%100!=0)**or**(year%400==0): print("leap year")

**else**:

print("not leap year")

[1]:

*#7)display the prime numbers within the given interval*

n = int(input("enter the number :")) count = 0

**for** i **in** range(1,n+1):

**if** n % i == 0 : count+=1

**if** count == 2 :

print("its a prime number")

**else**:

print("not a prime number")

enter the year2000 leap year

[2]:

*#8) display the Fibonacci sequence up to n-th term*

n = int(input("enter the number:")) *#0,1,1,2,3,5,8......*

output = []

**if** n == 1:

output.append(0)

enter the number :6 not a prime number

print(output)

**elif** n == 2:

output.append(0) output.append(1) print(output)

**else**:

output.append(0) output.append(1) a = 0

b = 1

sum = 0

**for** i **in** range(n): sum = a + b

output.append(sum) a = b

b = sum print(output)

[3]:

enter the number:10

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]

*#9) check if the number is an Armstrong number or not*

n = input("enter the number :") power = len(n)

output = 0

**for** i **in** n:

a = int(i)\*\*power output+=a

**if** output == int(n):

print("it a Armstrong number")

**else**:

print("its not a Armstrong number")

[4]:

*#10) Find the Sum of natural numbers up to n-th term*

n = int(input("enter the number : ")) output = 0

**for** i **in** range(n+1): output +=i

print(output)

enter the number :153 it a Armstrong number

enter the number : 10 55

[1]:

*#11) Write a function called show\_stars(rows). If rows are 5, it should print*␣

↪*the following*

**def** show\_stars(rows):

**for** i **in** range(1, rows+1): print("\*"\*i)

show\_stars(int(input("Enter your number: ")))

[2]:

Enter your number: 9

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*# 12. New string from old string by removing*

**def** remove\_chars(str, n):

**return** str[n:]

my\_string = input("Enter your string:")

i=int(input("Enter the index number where u want to remove: ")) new\_string = remove\_chars(my\_string, i)

print(new\_string)

[4]:

Enter your string:aaaaaajaa

Enter the index number where u want to remove: 6 jaa

*# 13. Numbers divisible by 5*

numbers = [47,96,56,22,70,35,53,55,48,75,36]

print("The numbers divisible by 5 from the list are:")

**for** number **in** numbers:

**if** number % 5 == 0:

print(number)

[8]:

The numbers divisible by 5 from the list are: 70

35

55

75

*# 14. HI Count*

str=("Hi,This is my python assignment ,Hi, Hi , Hi ") substr="Hi"

count=str.count(substr)

print("The count of the substring is : ",count)

The count of the substring is : 4

[9]:

*# 15. Number Pattern* n=int(input("Enter the range: ")) **for** i **in** range(1, n+1):

**for** j **in** range(i): print(i, end=" ")

print()

[10]:

Enter the range: 7 1

2 2

3 3 3

4 4 4 4

5 5 5 5 5

6 6 6 6 6 6

7 7 7 7 7 7 7

**def** palindrome(n): temp=n

rev=0

**while**(n>0):

d=n%10 rev=rev\*10+d n=n//10

**if** temp==rev:

print("it is a palindrome number")

**else**:

print("it is not palindrom number") n=int(input("Enter your number:")) palindrome(n)

[12]:

Enter your number:858

it is a palindrome number

*# 17. Swapping first and last element*

my\_list = [76,86,95,76,73,99,25,34]

print("Initial list: ") print(my\_list)

my\_list[0], my\_list[-1] = my\_list[-1], my\_list[0] print("Updated list after swapping:") print(my\_list)

Initial list:

[76, 86, 95, 76, 73, 99, 25, 34]

[13]:

*# 18. Swapping of two numbers in a list*

my\_list = [58,75,69,37,25,589]

print("The initial list is:") print(my\_list)

i1 =int(input("Enter i1:")) i2 =int(input("Enter i2:")) temp = my\_list[i1] my\_list[i1] = my\_list[i2] my\_list[i2] = temp

print("The Updated list is:") print(my\_list)

Updated list after swapping: [34, 86, 95, 76, 73, 99, 25, 76]

[14]:

The initial list is:

[58, 75, 69, 37, 25, 589]

Enter i1:2 Enter i2:3

The Updated list is:

[58, 75, 37, 69, 25, 589]

*# 19. Length of the list*

my\_list = [46,79,53,75,56,498,53]

print("My list elements: ") print(my\_list)

length = len(my\_list)

print("The total length of my list is: ") print(length)

[15]:

My list elements:

[46, 79, 53, 75, 56, 498, 53]

The total length of my list is: 7

*# 20. Maximum of two numbers*

a=int(input("Enter A: "))

b=int(input("Enter B: "))

**if** (a>b):

print("A is greater")

**else**:

print("B is greater")

Enter A: 10

Enter B: 5

A is greater

[16]:

*# 21. Minimum of two numbers*

a=int(input("Enter A: "))

b=int(input("Enter B: "))

**if** (a<b):

print("A is smaller")

**else**:

print("B is smaller")

[17]:

Enter A: 87

Enter B: 45 B is smaller

*# 22. Palindrome and Symmetricity of a srting* my\_string = input("Enter the string:") symmetrical = my\_string == my\_string[::-1]

palindrome = my\_string == "".join(reversed(my\_string))

**if** symmetrical:

print("The string is symmetrical")

**else**:

print("The string is not symmetrical")

**if** palindrome:

print("The string is a palindrome")

**else**:

print("The string is not a palindrome")

[18]:

*# 23. Reversing of string* my\_string = "Python Programming" print("My initial string is:") print(my\_string)

words = my\_string.split() words.reverse()

new\_string = " ".join(words) print("My reversed string is:") print(new\_string)

Enter the string:racecar The string is symmetrical The string is a palindrome

[19]:

My initial string is: Python Programming

My reversed string is: Programming Python

*# 24. Removing of index*

my\_string = "Hello, World!"

index\_to\_remove =int(input("Enter the index number to be removed:")) new\_string = my\_string[:index\_to\_remove] + my\_string[index\_to\_remove+1:]

print(new\_string)

[20]:

*# 25. Length of the string* my\_string = "This is my program" string\_length = len(my\_string) print("Length of my string is:") print(string\_length)

Enter the index number to be removed:7 Hello, orld!

[22]:

*# 26. Python code to print even length words in string*

print("Enter your string:") n=input()

s=n.split(" ")

print("The even indexed strings are:")

**for** i **in** s:

*#checking the length of words*

**if** len(i)%2==0:

print(i)

Length of my string is: 18

[23]:

Enter your string:

hi , how are you ??

The even indexed strings are: hi

??

*# 27. Python Tuple Size*

**import sys**

*# Define a tuple*

my\_tuple = (19,9,3,'hi','there')

*# Get the size of the tuple in bytes*

size = sys.getsizeof(my\_tuple)

*# Print the size in bytes*

print(f"The size of the tuple is **{**size**}** bytes")

The size of the tuple is 80 bytes

[24]:

*# 28. Max and Min elements of a list*

**import heapq**

**def** find\_k\_largest\_smallest\_elements(k, my\_tuple):

*# Find the k largest elements using the nlargest function*

largest\_elements = heapq.nlargest(k, my\_tuple)

*# Find the k smallest elements using the nsmallest function*

smallest\_elements = heapq.nsmallest(k, my\_tuple)

**return** largest\_elements, smallest\_elements my\_tuple = (55,595,262,962,858,25,2562,52,6)

k=int(input("Enter no. of elements needed:"))

largest, smallest = find\_k\_largest\_smallest\_elements(k, my\_tuple) print(f"The **{**k**}** largest elements in the tuple are: **{**largest**}**") print(f"The **{**k**}** smallest elements in the tuple are: **{**smallest**}**")

[25]:

Enter no. of elements needed:6

The 6 largest elements in the tuple are: [2562, 962, 858, 595, 262, 55]

The 6 smallest elements in the tuple are: [6, 25, 52, 55, 262, 595]

*# 29. Sum of tuple elements* my\_tuple=(16,132,53, 44, 56) print("Tuple=",my\_tuple) sum\_of\_tuple = sum(my\_tuple)

print("The sum of my tuple elements is:", sum\_of\_tuple)

[26]:

Tuple= (16, 132, 53, 44, 56)

The sum of my tuple elements is: 301

*# 30. Addition of row matrix*

matrix = ((18,25,32),(47,55,36),(71,58,99))

print("My row matrix:",matrix) print("The sum of each row matrix is:") **for** row **in** matrix:

row\_sum = sum(row) print(row\_sum)

My row matrix: ((18, 25, 32), (47, 55, 36), (71, 58, 99))

The sum of each row matrix is: 75

138

228