solutions,12jan,2022

1.write a program to find sum of natural numbers?

```
>>> num = int(input("Enter a number: "))

>>> if num < 0:
 >>>  print("Enter a positive number")
>>> else:
 >>>  sum = 0
  >>> # use while loop to iterate un till zero
  >>> while(num > 0):
  >>>      sum += num
 >>>      num -= 1
  >>>  print("The sum is",sum)
```

2.write a program to find a number of words from given string?

```
>>> string="hello, prerna dhingra here"
>>> words=len(string.split())
>>> print("total words:",words)
```

3. Write a program to find LCM?

```
>>> # defining a function to calculate LCM
>>> def calculate_lcm(x, y):
>>>   # selecting the greater number
>>> if x > y:
>>>       greater = x
>>>    else:
>>>       greater = y
>>>    while(True):
>>>       if((greater % x == 0) and (greater % y == 0)):
>>>           lcm = greater
>>>           break
>>>       greater += 1
>>>    return lcm

>>> # taking input from users
>>> num1 = int(input("Enter first number: "))
>>> num2 = int(input("Enter second number: "))
>>> # printing the result for the users
>>> print("The L.C.M. of", num1,"and", num2,"is", calculate_lcm(num1, num2))
```

4. Write a program to find HCF?

```
>>> # Python program to find H.C.F of two numbers

>>> # define a function
>>> def compute_hcf(x, y):
```

```
>>> # choose the smaller number
>>>     if x > y:
>>>         smaller = y
>>>     else:
>>>         smaller = x
>>>     for i in range(1, smaller+1):
>>>         if((x % i == 0) and (y % i == 0)):
>>>             hcf = i
>>>     return hcf

>>> num1 = int(input("enter first number:"))
>>> num2 = int(input("enter  second number:"))

>>> print("The H.C.F. is", compute_hcf(num1, num2))
```

5.write a problem to sort words in a string?

```
>>> my_str = "hello world, python tutorial"

>>> words = my_str.split()

>>> words.sort()

>>> for word in words:
    print(word)
```

6.write a program to generate even number series?

```
>>> # Python program to print Even Numbers in given range



>>> start = int(input("Enter the start of range: "))

>>> end = int(input("Enter the end of range: "))


>>> # iterating each number in list

>>> for num in range(start, end + 1):



>>> # checking condition

>>>     if num % 2 == 0:

>>>         print(num, end = " ")
```

7.write a program to generate idd number series?

```
>>> # Python program to print odd Numbers in given range



>>> start = int(input("Enter the start of range: "))

>>> end = int(input("Enter the end of range: "))


>>> # iterating each number in list

>>> for num in range(start, end + 1):



>>> # checking condition

>>>     if num % 2 == 1:

>>>         print(num, end = " ")
```

8.write a program to generate Fibonacci numbers series?

```
>>> ##generating Fibonacci series
>>> n_terms = int(input ("How many terms the user wants to print? "))

>>> # First two terms
>>> n_1 = 0
>>> n_2 = 1
>>> count = 0

>>> # Now, we will check if the number of terms is valid or not
>>>if n_terms <= 0:
>>>     print ("Please enter a positive integer, the given number is not valid")
>>> # if there is only one term, it will >>  return n_1
>>> elif n_terms == 1:
>>>     print ("The Fibonacci sequence of the numbers up to", n_terms, ": ")
>>>     print(n_1)
>>> # Then we will generate Fibonacci sequence of number
>>> else:
>>>     print ("The fibonacci sequence of the numbers is:")
>>>     while count < n_terms:

>>>         print(n_1)
>>>         nth = n_1 + n_2
>>>         # At last, we will update values
>>>         n_1 = n_2
```

```
>>>        n_2 = nth
>>>       count += 1
```

9.write a program to check whether character is vowel or not?

```
>>> # taking user input
>>> ch = input("Enter a character: ")

>>> if(ch=='A' or ch=='a' or ch=='E' or ch =='e' or ch=='I'
 or ch=='i' or ch=='O' or ch=='o' or ch=='U' or ch=='u'):
>>>      print(ch, "is a Vowel")
>>> else:
 >>>     print(ch, "is a Consonant")
```

10.write a program to find number of digits from given number?

```
>>> count = 0
>>> number = int(input("Enter a number "))

>>> while (number > 0):
>>>    number = number//10
>>>    count = count + 1

>>> print ("Total number of digits : ",count)
```