PYTHON Questions:

Write Python Code for the following problems:

1. **a. Print values from 1 t0 N**
   b. Print values N to 1

   N is input from the user.

   Eg:

   a. Input : 5

      Output:

      1

      2

      3

      4

      5

   b. Input:5
      Output:
      5
      4
      3
      2
      1

2. **a. Print values odd values from 1 to N**
   b. Print values even values from 1 to N
   N is input from the user.

   Eg:

   a. Input : 5

      Output:

      1

      3

      5

b. Input:5
Output:
4
2

3. **Print the numbers from 1-N which is divisible by 5 and 8**
N is input from the user.

Eg:

Input:300
Output:
40
80
120
160
200
240
280

4. **Check whether the given year is leap year or not.**

Input: 1996
Output: Leap Year

Input: 1900
Output: Non leap year

Input: 2001
Output: Non leap year

5. **a. Filter only odd values from list. Store it in a new list. And print the new list.**

b. Filter only even values from list. Store it in a new list. And print the new list.

Input: [1,2,3,4,5]
Output: [1,3,5]

Input: [1,2,3,4,5]
Output: [2,4]

6. **a. Find the sum of values in the list using while loop**

   b. Find the product of values in the list using while loop

   Input: [1,2,3,4,5]
   Output: 15

   Input: [1,2,3,4,5]
   Output: 120

7. **In the given list, find the sqrt of positive number and print "not determined" for negative number.**

   Input: [4,25,-4,-25,100]
   Output: [2,5,"not determined", "not determined",10]

8. **Filter only the vowels from the string**

   Input: "greatlearning"
   output:
   e
   a
   e
   a
   i

9. **Print the words which starts with consonants in a given sentence.**

   Input: "this is an information about programming"
   Output
   this
   programming

10.

Given a list of the string. Store the length of each element in the new list. Print the list

Input: ['great','learning','data','science','machine','learning']
Output:[5,8,4,7,7,8]

11.

Filter the palindrome numbers in the given tuple and save it in the tuple.

Input:(10,11,12,21,22,101,123,111,152)
Output:(11,22,101,111)

12.

Iterate through a dictionary and print the keys and values whose values are divided by 3.

Input : {1:5,2:9,3:15,4:12}
Output:
(2,9)
(3,15)
(4,12)

13.

Filter the keys which are even number and store it in another dictionary. And display it
Input : {1:5,2:9,3:15,4:12,5:10}
Output: {2:9,4:12}

14. Print the mathematical table from 1-10 for give N number

Input:3
Output:
1 * 3 = 3
2 * 3 = 6
3 * 3 = 9
4 * 3 = 12
5 * 3 = 15
6 * 3 = 18
7 * 3 = 21
8 * 3 = 24
9 * 3 = 27
10 * 3 = 30

Input:5
Output:
1 * 5 = 5
2 * 5 = 10
3 * 5 = 15
4 * 5 = 20
5 * 5 = 25
6 * 5 = 30
7 * 5 = 35
8 * 5 = 40
9 * 5 = 45
10 * 5 = 50

15.

Print the Fibonacci series for N numbers.
N - No of elements in the sequence

Input:9
Output:
0
1
1
2
3
5
8
13
21

18)

a. Find the sum of digits of a number

Input: 145
Output: 10

Input: 74123
Output: 17

b. Find the sum of all the items in a list.

Input: [1, 2, -8, 0]
Output:-5

19)

Find the factorial of a number

Input:5
Output:120

20)

Check whether the given number is prime number or not

Input: 17
Output: Prime number

Input: 21
Output: Composite number

Input:1
Output: Neither prime or composite

21)

Find whether the given number is a Armstrong number or not?

Input: 153
Output: Armstrong number

Input: 221
Output: Not an Armstrong number

Input: 1634
Output: Armstrong number

Input: 2317
Output: Not an Armstrong number

22)

Filter only the integers and strings from the given list and save it in another list and display it

Input: [1,2.3,5,"hello",2+3j,True,"hi","False"]
Output: [1,5,"hello","hi","False"]

23)

Find whether the given number is perfect square or not

Input: 100
Output: Perfect square

Input: 70
Output: Not a Perfect square

24)

Find the largest number from a list.

Input: [1, 2, -8, 0]
Output:-5

25)

Multiply the numbers in a list.

Input: [1, 2, -8, 0]
Output:-16

26)

Find the smallest number from a list.

Input: [1, 2, -8, 0]
Output: -8

27)

To convert temperatures to and from celsius, fahrenheit.

[Formula : c/5 = f-32/9 [where c = temperature in celsius and f = temperature in fahrenheit]

Expected Output :
60°C is 140 in Fahrenheit
45°F is 7 in Celsius

28)

To construct the following pattern, using a nested for loop.

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

29)

To accept a word from the user and reverse it.

Input a word to reverse: Python.
Output: nohtyP

30) **a. To calculate the length of a string.**

Input: happy
Output: 5

b. To count the number of characters (character frequency) in a string.
Input: google.com
Output: {'g': 2, 'o': 3, 'l': 1, 'e': 1, '.': 1, 'c': 1, 'm': 1}