Python Practice Questions

• Python Basics

1. Take a string as a user input and display only those characters present at even index number.

2. Create a list of 10 integers taking user input. And display the sum of only those numbers present at odd indexes.

3. Sort this given list , List1 = [15, 47, 68, 89, 35, 13] , without using the sort function

4. Print the following pattern

   1

   12

   123

   1234

   12345

5. WAP to accept a 4 digit number from user and check if it's a palindrome number.

6. Given a two list of numbers create a new list such that new list should contain only odd numbers from the first list and even numbers from the second list

7. Write a function called exponent(base, exp) that returns an int value of base raises to the power of exp.

8. Write a recursive function to count the number of digits present in a number given by the user.

9. WAP to replace the word "red" with "blue" from the string S =" The red bag has 10 red pens".

10. WAP to accept a choice from the user either 1 or 2 and find the sum of series accordingly.

    1 : S= a+ a^2/2 + a^3/3 + a^4/4 +......+ a^n/n

    2: S=(1+2/2*3) + (1+2+3/1*2*3)+ .... +(1+2+3+...+n/1*2*3*.....*n)

    (Accept n from the user)

11. Given an input string, count occurrences of all characters within a string

    Sample Input:

S = " Mississippi "
Sample Output:

{'M' : 1, 'i ' : 4, 's' : 4, 'p' : 2}

12. WAP to remove special symbols/Punctuation from a given string

    S = Hello@World#How are(! you? *&

    Output:

    Hello World How are you

13. Split a given string on hyphens into several substrings and display each substring

    S = "Python-is-a-programming-language"

    Output:

    Python

    is

    A

    programming

    language

14. Given two strings, s1, and s2 return a new string made of the first, middle, and last characters each input string

    s1 = "Hello"

    s2 = "World"

    Output:

    S=HWlrod

15. Given dictionary:

    Dict1 = {

      "name": "Arman",

      "age":21,

      "salary": 80000,

      "city": "Ranchi",

      "country": "India"

}

16. Reverse the given tuple T = (10, 20 , 30 , 40, 50)

17. Modify the first item (22) of a list inside a following tuple to 222

    T= (11, [22, 33], 44, 55)

18. Counts the number of occurrences of item 50 from a tuple

    T = ('a' , 'b' ,'c' , 'a', 'e, 'a' , 'b' , 'e' ,'o')

19. Return a new set of identical items from a given two set

    set1 = {10, 20, 30, 40, 50}

    set2 = {30, 40, 50, 60, 70}

    Expected output: {40, 50, 30}

20. Remove items 10, 20, 30 from the following set at once

    set1 = {10, 20, 30, 40, 50}

    Expected output: {40, 50}

21. Update set1 by adding items from set2, except common items

    set1 = {10, 20, 30, 40, 50}

    set2 = {30, 40, 50, 60, 70}

    Expected output: {70, 10, 20, 60}

22. Remove duplicate from a list and create a tuple and find the minimum and maximum number

    Given: sampleList = [87, 45, 41, 65, 94, 41, 99, 94]

    Output :

    unique items [87, 45, 41, 65, 99]

    tuple (87, 45, 41, 65, 99)

    min: 41

    max: 99

23. Given a two list of equal size create a Python set such that it shows the element from both lists in the pair

Expected Output:

First List [2, 3, 4, 5, 6, 7, 8]

Second List [4, 9, 16, 25, 36, 49, 64]

Result is {(6, 36), (8, 64), (4, 16), (5, 25), (3, 9), (7, 49), (2, 4)}

24. Define a function that accepts a decimal number and returns its binary equivalent

25. Suppose you want to develop a program to play a lottery.

The program randomly generates a two-digit number and prompts the user to enter a two-digit number, and determines whether the user wins according to the following rules:

a) If the user has entered that excat same number which matches with the randomly generated number then user wins Rs10,000

b)   If all the digits in the user's input match all the digits in the lottery number,

then the award is Rs 3,000.

c)   If only one digit in the user's input matches a digit in the lottery number, the award is $1,000.

26. Create a new dictionary by extracting the following keys from above dictionary

Keys to extract :

Key = { "name", "salary"}

1. Delete set of keys from a dictionary

    Keys to remove = { "age", "country"}

2. Rename key "city" to "location" in the dictionary