Python Practice Problems

1. User will input (3ages).Find the oldest one
2. Write a program that will convert celsius value to fahrenheit
3. User will input (2numbers).Write a program to swap the numbers
4. Write a program that will give you the sum of 3 digits
5. Write a program that will reverse a four digit number.Also it checks whether the reverse is true.
6. Write a program that will tell whether the number entered by the user is odd or even.
7. Write a program that will tell whether the given year is a leap year or not.
8. Write a program to find the euclidean distance between two coordinates.
9. Write a program that take a user inputr of three angles and will find out whether it can form a triangle or not.
10. Write a program that will take user input of cost price and selling price and determines whether its a loss or a profit
11. Write a program to find the simple interest when the value of principle,rate of interest and time period is given.
12. Write a program to find the volume of the cylinder. Also find the cost when ,when the cost of 1litre milk is 40Rs.
13. Write a program that will tell whether the given number is divisible by 3 & 6.
14. Write a program that will determine weather when the value of temperature and humidity is provided by the user.

    TEMPERATURE(C) HUMIDITY(%) WEATHER

>= 30	>=90	Hot and Humid
>= 30	< 90	Hot
<30	>= 90	Cool and Humid
<30	<90	Cool

15. Write a program that will take three digits from the user and add the square of each digit.
16. Write a program that will check whether the number is armstrong number or not.
17. Write a program that will take user input of (4 digits number) and check whether the number is narcissist number or not.
18. Write a program that will give you the in hand salary after deduction of HRA(10%),DA(5%),PF(3%), and tax(if salary is between 5-10 lakh–10%),(11-20lakh–20%),(20< _ – 30%)(0-1lakh print k).
19. Write a menu driven program - 1.cm to ft 2.kl to miles 3.usd to inr 4.exit
20. Write a program that will tell the number of dogs and chicken are there when the user will provide the value of total heads and legs.
21. Write a program that will swap numbers
22. Write a program to find the sum of first n numbers, where n will be provided by the user. Eg if the user provides n=10 the output should be 55.
23. Write a program that can multiply 2 numbers provided by the user without using the * operator
24. Write a program that can find the factorial of a given number provided by the user.
25. Write a program to print the first 25 odd numbers
26. Write a program to print whether a given number is prime number or not

27. Print all the armstrong numbers in the range of 100 to 1000
28. The current population of a town is 10000. The population of the town is increasing at the rate of 10% per year. You have to write a program to find out the population at the end of each of the last 10 years. For eg current population is 10000 so the output should be like this:

    10th year - 10000

    9th year - 9000

    8th year - 8100 and so on
29. Write a program to print all the unique combinations of 1,2,3 and 4
30. User will provide 2 numbers you have to find the HCF of those 2 numbers
31. User will provide 2 numbers you have to find the by LCM of those 2 numbers
32. Print first 25 prime numbers
33. Print the first 20 numbers of a Fibonacci series
34. Write a program to find the compound interest
35. Write a Python program that accepts an integer (n) and computes the value of n+nn+nnn.
36. Take a number from the user and find the number of digits in it.
37. Print all factors of a given number provided by the user.
38. Find the reverse of a number provided by the user(any number of digit)
39. Write a program to print the following pattern

    *

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    ***

    ****

    *****
40. Write a program to print the following pattern

    *

    **

    ***

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*

41. Write a program to print the following pattern

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    *
   * * *
  * * * * *
 * * * * * * *
* * * * * * * * *
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42.Write a program to print the following pattern

1

1 2 1

1 2 3 2 1

1 2 3 4 3 2 1

1 2 3 4 5 4 3 2 1

43.Write a program to print the following pattern

1

2 3

4 5 6

7 8 9 10

44. Write a program to calculate the sum of the following series till the nth term

$1/1! + 2/2! + 3/3! + 4/4! + \ldots\ldots + n/n!$

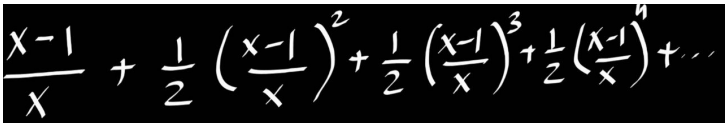
n will be provided by the user

45. Write a Python Program to Find the Sum of the Series till the nth term:

$1 + x^2/2 + x^3/3 + \ldots x^n/n$

n will be provided by the user

46. The natural logarithm can be approximated by the following series.



If x is input through the keyboard, write a program to calculate the sum of the first seven terms of this series.

47. Write a program that keeps on accepting a number from the user until the user enters Zero. Display the sum and average of all the numbers.
48. Write a program that accepts 2 numbers from the user a numerator and a denominator and then simplifies it

    Eg if the num = 5, den = 15 the answer should be ⅓

    Eg if the num = 6, den = 9 the answer should be ⅔
49. Find the length of a given string without using the len() function.
50. Extract username from a given email.

    Eg if the email is nitish24singh@gmail.com then the username should be nitish24singh
51. Count the frequency of a particular character in a provided string. Eg 'hello how are you' is the string, the frequency of h in this string is 2.
52. Find the index position of a particular character in another string.
53. Count the number of vowels in a string provided by the user.
54. Write a program which can remove a particular character from a string.
55. Write a program that can check whether a given string is palindrome or not.

56. Write a python program to remove all the duplicates from a list
57. Write a python program to convert a string to title case without using the title()
58. Write a python program to find the max item from a list without using the max function
59. Write a python program to reverse a list
60. Write a python program to search a given number from a list
61. Write a program that can create a new list from a given list where each item in the new list is square of the item of the old list
62. Write a program that can reverse words of a given string.

    Eg if the input is Hello how are you

    Output should be you are how Hello

63. Write a program that can count the number of words in a given string
64. Write a program to check if a list is in ascending order or not
65. Create 2 lists from a given list where 1st list will contain all the odd numbers from the original list and the 2nd one will contain all the even numbers
66. Write a program to merge 2 list without using the + operator
67. Write a program to replace an item with a different item if found in the list
68. Write a program that can convert a 2D list to 1D list
69. Write a program that can perform union and intersection on 2 given list.
70. Write a program that can print the max item of each row of a matrix.
71. Write a program that can convert an integer to string.
72. Write a program to print the shape of a matrix.
73. Write a program that can check if you can perform matrix multiplication on 2 matrices
74. Write a program to perform matrix multiplication on 2 matrices

75. Write a program that can sort a given unsorted list. Dont use any built in function for sorting.
76. Write a program that can find the most used word in a bollywood song
77. Assume a list with numbers from 1 to 10 and then convert it into a dictionary where the key would be the numbers of the list and the values would be the square of those numbers.
78. Write a program to merge two given dictionary
79. Write a program to swap the key value pair for max and min values
    Eg if the dict is like this {'a':1,'b':2,'c':3}
    Output should be {a:3,b:2,c:1}
80. Write a program to find histogram of a given set of numbers. Take bin size from user. Print the result in the form of a dictionary.
81. Write a function that accepts a string and returns the number of upper case chars and lower case chars as a dictionary
82. Write a function that accepts a list of strings and performs Bag of words and convert it to numerical vectors.
    https://en.wikipedia.org/wiki/Bag-of-words_model
83. Write a dummy program that can perform login and registration using a menu driven program
84. Write a program that accepts neighbors(set of 2D co-ordinates) and a point(single 2D co-ordinate) and tells nearest neighbor(in terms of euclidean distance)
85. Write a function that accepts a number and returns it's factorial. You can not use any loop