Practice Problems for function:

1.
Write a program to print the sum of two numbers entered by the user by defining your own function.

2.
Define a function that returns the product of two numbers entered by the user.

3.
Write a program to print the circumference and area of a circle of radius entered by the user by defining your own function.

4.
Define two functions to print the maximum and the minimum number respectively among three numbers entered by the user.

5.
Define a program to find out whether a given number is even or odd.

6.
A person is eligible to vote if his/her age is greater than or equal to 18. Define a function to find out if he/she is eligible to vote.

7.
Define a function to find out if the number is prime or not.

8.
Write a program that will ask the user to enter his/her marks (out of 100). Define a function that will display grades according to the marks entered as below:
Marks   Grade
91-100   AA
81-90   AB
71-80   BB
61-70   BC
51-60   CD
41-50   DD
<=40   Fail

9.
Write a program to print the factorial of a number by defining a function named 'Factorial'.
Factorial of any number n is represented by n! and is equal to 1*2*3*....*(n-1)*n. E.g.-
4! = 1*2*3*4 = 24
3! = 3*2*1 = 6

2! = 2*1 = 2
Also,
1! = 1
0! = 0

10.
Print the multiplication table of 15 using function.

11.
Define a function to print the prime factors of a number.

12.
Define a function to know the nth term of a Fibonacci series.

13.
Define a function named 'perfect' that determines if a parameter number is a perfect number. Use this function in a program that determines and prints all the perfect numbers between 1 and 1000.
[An integer number is said to be a "perfect number" if its factors, including 1(but not the number itself), sum to the number. E.g., 6 is a perfect number because 6=1+2+3].

14.
Define a function to calculate the power of a number raised to other i.e. a^b using recursion where the numbers 'a' and 'b' are to be entered by the user

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15.
Write a program that takes as input your gross salary and your total saving and uses another function named taxCalculator() to calculate your tax. The taxCalculator() function takes as parameters the gross salary as well as the total savings amount. The tax is calculated as follows:
(a) The savings is deducted from the gross income to calculate the taxable income. The maximum deduction of savings can be Rs. 100,000, even though the amount can be more than this.
(b) For up to 100,000 as taxable income the tax is 0 (Slab 0); beyond 100,000 to 200,000 tax is 10% of the difference above 100,000 (Slab 1); beyond 200,000 up to 500,000 the net tax is the tax calculated from Slab 0 and Slab 1 and then 20% of the taxable income exceeding 200,000 (Slab 2); if its more than 500,000, then the tax is tax from Slab 0, Slab 1, Slab 2 and 30% of the amount exceeding 500,000.

16.
Write a function that takes your date of birth in YYYY, MM and DD format (separated by spaces) as input as well as the current date, in same format, and calculates your age in years, months and days. You must check for leap years also. Write a separate function to check for leap year.