Function Exercises

1. Create a class called MainProgram and inside the class create a function called display() with no parameters and inside a body of display method add a line "Hello, I am called". Call the function from the main method of MainProgram by creating the object of MainProgram.
2. Write a program with a method named getTotal that accepts two integers as an argument and return its sum. Call this method from main( ) and print the results.
3. Define a method that returns the product of two numbers entered by the user.
4. Write a program to print the circumference and area of a circle of radius entered by the user by defining your own method.
5. A person is eligible to vote if his/her age is greater than or equal to 18. Define a method to find out if he/she is eligible to vote.
6. Write a program to print the factorial of a number by defining a method getFactorial(int number).
7. Create a function called averageNumber(int num1 , int num2 , int num3) and inside the function display the highest and lowest among three numbers.
8. Create a function called sum(int num1 , int num2 , int num3) and inside the function return the sum of three numbers and display it in the part from where the function was called.
9. WAP to check whether a number is even or odd using function. The function name should be isEven(int parameter), which returns true if the number is even and return false if the number is odd.
10. WAP that displays all the numbers from range void display(int start , int end)
11. WAP that displays all the odd numbers from range void displayOddNumbers(int start , int end)
12. WAP that check a prime number boolean checkPrime(int testNumber)
13. WAP that displays all the prime numbers between 1 and 1000. Use the above checkPrime function to identify the prime number.
14. WAP to print the multiplication table of a number using a function printMultiplication(int inputNumber)
15. WAP a java program that takes a number and returns the length of the number.
16. Write a java program to count all the words of a string . Example : I want to be a software engineer. Output : 7
17. Create a function that returns true when both the parameters are equal else return false. isSameNum(4, 8) → false

18. Define two methods to print the maximum and minimum number respectively among three numbers entered by the user.
19. Write a program to print the sum of two numbers entered by users defining your own method.
20. Write a program which will ask the user to enter his/her marks (out of 100). Define a method 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

21. Write a method that takes as input a nonnegative integer and returns true if the number is a palindrome; otherwise, it returns false. Also write a program to test your method.
22. Write a value-returning method, isVowel that returns the value true if a given character is a vowel, and otherwise returns false. In main() method accept a string from the user and count the number of vowels in that string.
23. Write a method that takes input string from the user and return true if it contains vowels otherwise false.
24. Write a method to find factorial using recursion.
25. Write a method to find gcd using recursion.
26. Write a method to find the area of a circle.
27. Write a method to generate a random number.
28. Write a Java method to count all words in a string

    Test Data:

    Input the string: The quick brown fox jumps over the lazy dog.

    Expected Output:

    Number of words in the string: 9
29. Write a Java method to check whether a year (integer) entered by the user is a leap year or not

    Expected output:

Input a year: 2017
false

30. Write a Java method to check whether a string is a valid password
Password rules:
A password must have at least ten characters.
A password consists of only letters and digits.
A password must contain at least two digits.

Input a password (You are agreeing to the above Terms and Conditions.):
abcd1234
Password is valid: abcd1234

31. Write Java methods to calculate the area of a triangle.
Expected Output:

Input Side-1: 10
Input Side-2: 15
Input Side-3: 20
The area of the triangle is 72.6184377413890

32. Write a Java method to display the current date and time.
33. Write a program with a method named getTotal that accepts two integers as an argument and return its sum. Call this method from main( ) and print the results.
34. Write a program in java to swap two numbers using a function.
35. Write a program in java to find the sum of the series 1!/1+2!/2+3!/3+4!/4+5!/5 using the function.
36. Write a program in java to check armstrong and perfect numbers using the function.
Test Data :

Input any number: 371

Expected Output :

The 371 is an Armstrong number.
The 371 is not a Perfect number.

37. A non-empty array A of length n is called an array of all possibilities if it contains all numbers between 0 and A.length-1 inclusive. Write the method

named isAllPossibilities that accepts an integer array and returns 1 if the array is an array of all possibilities, otherwise it returns 0.

38. Write a program in java to check whether two given strings are an anagram.
    Test Data :

    Input the first String : spare

    Input the second String : pears

    Expected Output :

    spare and pears are Anagram.
39. Write the simple java function that reads data from one file and writes the data to another file.
40. An array is called balanced if it's even number elements (a[0],a[2],etc.) are even and its odd numbered elements (a[1],a[3],etc.) are odd. Write a function named Balanced that accepts an array of integers and returns 1 if the array is balanced otherwise it returns 0.
41. Create a simple java method to read integers from users and manipulate that data(like addition).
42. Create a simple java method to read String from users and manipulate that data(like concatenation).