General programming logic

1. Write a function to add two numbers.
2. Write a function to get biggest between 2 numbers.
3. Write a function to find whether the give number is even or not
4. Write a function to get grade of 3 subject marks.
   1. Grade is based on average of 3 subject marks
      1. Average>90 => A+
      2. Average<90 and average>=80 => A
      3. Average<80 and average>=70 => A-
      4. Average<70 and average>=60 => B+
      5. Average<60 and average>=50 => B
      6. Average<50 => FAIL
5. Write a function to print first 10 natural numbers
6. Write a function to print first 10 natural numbers in reverse order
7. Write a function to print first 10 even natural numbers
8. Write a function to print numbers between the range ( say 10 to 100 OR 100 to 200 etc.,)
9. Write a function to print mathematical table of given number
10. Write a function to find whether the given number is prime or not.
11. Write a program to print prime numbers between 2 to 100
12. Write a function to get sum of individual digits of given number
    1. i/p: 123 => output : 6 ( i.e., 1+2+3)
13. Write a function to get lucky number of given number
    1. Lucky number => sum of individual digits of given number
    2. If the sum is more than 9, again do sum of individual digits of this sum.
       1. i/p : 12345 => 6 ( i.e., 1+2+3+4+5 = 15, 1+5 = 6)
14. Write a function to get reverse of given number
15. Write a function to find whether the given number is palindrome or not
16. Write a function to find factorial of given number
17. Write a program to find ncr. Hint : ncr = ( n! / ( (n-r)! \* r!)
18. Write a function to find sum of individual digits of given number
19. Write a function to get reverse of given number
20. Write a function to find whether the given number is palindrome or not.
21. Write a function to convert given digit into the word format.
    1. If i/p is 1 -> output : One
    2. If i/p is 2 -> output : Two
22. Write a function to convert given number into word format.
    1. If i/p is 123 -> output : One Hundred Twenty Three

Printing \* or number in specific format

1. Write a program to print the \*s in the following formats

\*

\* \*

\* \* \*

\* \* \* \*



\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

* 1. 1

1 2

1 2 3

1 2 3 4

|  |
| --- |
|  |

**String Operations**

1. Write a function to find the given two strings are equals or not.
2. Write a function to reverse the string
3. Write a function to find whether the given string is palindrome or not.
4. Write a function to count number characters in the given string.
5. Write a function to count number words in the given string
6. Write a function to count number of lower characters in the given string
7. Write a function to simulate trim function. (i.e., remove white spaces in the beginning and ending of the string if any)
8. Write a function to remove extra white spaces in the given sentence( If more than once white spaces there, remove it.)
   1. Ex input: Hello how are you?
   2. Output: Hello how are you?
9. Write a function to count how many number of times a particular character appears/present in the given string.

Ex: given string = “hello word”

Given character = ‘l’

Output: 2

1. Write a program to count how many number of times each character appears/present in the given string.

Ex: given string = “hello word”

Output:

h.....1

e.....1

l......2

o.....2

w....1

r.....1

d...1

Note: Do it after learning HashMap.

Arrays

Write a function to get biggest number in the given array.

Write a function to get index /position of biggest number in the given aray

Write a function to get sum of all the numbers in the given array

Write a function to search whether the given number is present or not in the given array (linear search and binary search)

Write a function to sort the given array (bubble sort/selection sort/ quick sort/ merge sort etc.,)

Write a function to merge two given arrays.

Write a function to insert an element in the array in given position

Write a function to delete an element from given position in the array.

Write a function delete given element from given array.

OOP

1. Create a class Employee,
   1. add id, name and salary properties. Generate getter/setter methods
   2. Test it.
      1. Write EmployeeTest class.
      2. Create instance of Employee in main method and try to display the employee details.
   3. Add a parameterized constructor in the Employee class (with mandatory properties). Test the same in EmployeeTest class.
   4. Create two objects of Employee class. Compare these objects whether two are equal or not.
      1. Compare by gibing same values.
      2. Compare by giving same values.
      3. Note: understand equals and hashCode methods
   5. Create ContractEmployee class which extends Employee class. Add ‘duration’ property and setter/getter methods
      1. Test the same in EmployeeTest class.
   6. Create Address class
      1. Add street, city, pincode properties and generate setter/getter methods
      2. Add Address object in Employee Class and generate setter/getter methods
      3. Test the same in EmployeeTest by creating
         1. Two employee instances with different details(id, name, salary and address)
         2. Display both employee details with address.