QUESTION#1

Write a program containing two functions named:

1- 'IterativeSum( )' that iteratively computes and returns the sum of first 10 natural numbers.
2- 'RecursiveSum( )' that recursively computes and returns the sum of first 10 natural numbers.

Call the appropriate function based upon the user's choice from main(). Use appropriate parameters and return type.

QUESTION#2

Write a program containing two functions named:

1- 'IterativeBinToDec( )' that iteratively computes and displays the decimal equivalent of entered binary number being passed as argument to this function.
2- 'RecursiveBinToDec( )' that recursively computes and displays the decimal equivalent of entered binary number being passed as argument to this function.

The program must continue to take input and displaying the result until the user quits. Use appropriate parameters and return type.

QUESTION#3

Compute recursively the count of the occurrences of 5 as a digit with an exception that a 5 with another 5 immediately to its left counts double, so 5515 yields 4.

QUESTION#4

The Fibonacci series (0, 1, 1, 2, 3, 5, 8, 13, 21,….) begins with the terms 0 and 1 and has the property that each succeeding term is the sum of the two preceding terms. Write a recursive function **`fibonacci(n)`** that uses type **`int`** to calculate the Fibonacci series to nth term.

QUESTION#5

Find recursively the gcd (greatest common divisor) of 2 numbers passed as arguments.

QUESTION#6

Write a program containing two functions named:

1- 'IterativeSum( )' that iteratively computes and returns the sum of range of natural numbers (like 10 to 15).
2- 'RecursiveSum( )' that recursively computes and returns the sum of range of natural numbers (like 10 to 15).

Take range as input from user and pass them as arguments to this function.

QUESTION#7

Write a program containing two functions named:

3- 'IterativeDecToBin( )' that iteratively computes and displays the binary equivalent of entered decimal number being passed as argument to this function.
4- 'RecursiveDecToBin( )' that recursively computes and displays the binary equivalent of entered decimal number being passed as argument to this function.

The program must continue to take input and displaying the result until the user quits. Use appropriate parameters and return type.

QUESTION#8

Compute recursively n mod m without using %.