I/O

A1)Write a program that prints 'Hello World' to the screen.

A2)Write a program that asks the user for his name and greets him with his name

A3)Write a program that takes in two number and returns the sum of the two numbers.

A4)Write a program) that converts temperature from Celsius to Fahrenheit scale.
***°C to °F Conversion:** Multipy by 9, then divide by 5, then add 32.*

A5)Write a program to calculate the distance between two points represented by Point 1 (x1, y1) and Point 2 (x2, y2). The formula for calculating distance is given below:

$$distance = \sqrt{(x2-x1)2 + (y2-y1)2}$$

Conditionals

B1).Take in a number as an argument and print True if it is an even number,False Otherwise

B2)Write a program that accepts the 3 sides of a triangle as inputs. The function should return True if it is an isosceles triangle. An isosceles triangle has 2 equal sides. An equilateral triangle is a special case of isosceles triangle.

B3)Write a program that accepts the 3 sides of a triangle as inputs.The program should print True if it is a scalene triangle and False otherwise. A scalene triangle has no equal sides

B4)Write a program that accepts the 3 sides of a triangle as inputs.The program should print True if they form a triangle and False otherwise.

Looping

F1)Write a program that accepts a natural no N as an input.The program should print the sum of first N natural numbers.Please Avoid using the Formula N(N+1)/2*

F2)Create a program) that takes in two numbers as arguments and returns the sum of all the numbers between the ***two*** *numbers (inclusive).*

F3)Write a program that accepts a natural no N as an input and checks if the number is prime.

F4)Write a program that takes in 2 numbers as input and returns the Greatest Common Divisor..

F5)Write a program that takes in a number as input and returns the sum of the individual digits in the number.

Lists

L1)Write a program that takes a list of integers and adds up the elements .

L2)Write a program) that takes a nested list of integers and add up the elements from all of the nested lists.

L3)Write a program) that takes a list of numbers and returns the cumulative sum; that is, a new list where the ith element is the sum of the first i+1 elements from the original list. For example, the cumulative sum of [1, 2, 3] is [1, 3, 6].

L4)Write a program) that takes a list as a parameter and returns True if the list is sorted in ascending order and False otherwise.

L5)Write a program) that count the number of odd numbers in a list

L6)Write a program) that returns the maximum number in a list.

Recursion

R1)Write a program that calculates and returns the factorial of a numeber.

R2)Write a program that calculates the value of x raised to the power of y.

R3)Write a program that takes in a number as argument. The function should calculate and return the fibonacci number for the number passed in.

r4) Write a program that compute the gcd of 2 integers using Euclid's algorithm:

R5)Write a program that takes in an integer and returns the sum of the digit in the integer.

Strings

S1)Write a program that takes a string as an argument and displays the letters backward, one per line.

S2)Write a program that takes a string as an argument and displays the letters backward, one per line.

S3)Write a program that takes in a word and a letter as arguments and remove all the occurrence of that particular letter from the word. The function will returns the remaining leters in the word.

S4)Write a program that changes the case of all the letters in a word and returns the new word.

S5)Write a program that takes in a word and a substring as arguments and returns the position (0 indexed) of the substring if it is found in the word. The function returns -1 if the substring is not found.