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**ALGORITHM TO ADD 2 INTEGER NUMBERS**

1. Start
2. Input an integer number Num1
3. If non-integer number is entered by user, ask the user to repeat input
4. Input an integer number Num2
5. If non-integer number is entered by user, ask the user to repeat input
6. Declare a variable Num1, Num2 and Sum, of integer data type.
7. Calculate Sum = Num1 + Num2
8. Print Sum
9. Stop

**ALGORITHM TO FIND THE FACTORIAL OF A NUMBER**

1. Start
2. Declare a variable Num and Factorial, of integer data type
3. Assign 1 to variable Factorial so it does not go beyond 1
4. Enter a positive integer number Num
5. If non-integer number is entered by user, ask the user to repeat input
6. Initiate a loop

* While Num is greater than zero

1. Multiply Factorial by Num and store result in Factorial
2. Subtract 1 from Num

* End while loop

1. Print out Factorial
2. Stop

**ALGORITHM TO FIND THE FIBONACCI SEQUENCE**

1. Start
2. Declare a variable Num1, Num2, Num3 and n, of integer data type
3. Assign zero to the variable Num1 and one to both variable Num2 and Num3.
4. Enter a positive integer n to hold the number of sequence
5. If non-integer number is entered by user, ask the user to repeat input
6. Initiate a loop

* For counter of integer data type is zero
* The counter is less than or equal to n(number of sequence)
* Increase counter by 1 until it reaches n

1. Print Num1
2. Put Num1 to equal Num2
3. Put Num2 to equal Num3
4. Put Num3 to equal the sum of Num1 and Num2

* End for loop

1. Stop

**ALGORITHM TO SORT A GIVEN SET OF NUMBERS (BUBBLE SORT)**

1. Start
2. Declare a variable range and arr, of integer data type
3. Enter an integer number to give the size of the arrays and store it in variable range
4. If non-integer number is entered by user, ask the user to repeat input
5. Enter the element that are in the range and store it in variable arr
6. If non-integer number is entered by user or the elements exceed the range, ask the user to repeat input
7. If elements in the arr is one, then stop. If not, proceed to no. 8
8. Initiate loop
9. Starting from arr 0 for i = 0
10. Make one pass along the list comparing each item with the one beside(adjacent to) it, swapping if necessary
11. If no swaps occur, then stop(the list is now in order). Otherwise ignore the last term in the list, go back to (b).
12. End loop
13. Print i
14. Stop

**ALGORITHM TO CONVERT A GIVEN NUMBER FROM ONE BASE TO ANOTHER**

1. Declare variables inputNumber, presentBase and targetBase, each of integer data type
2. Get the inputNumber, presentBase and targetBase from the user
3. If non-integer number is entered by user, ask the user to repeat input
4. Declare a variable convertedBase of integer data type
5. Initiate loop
6. If the targetBase is decimal(10), multiply each digit of the inputNumber by 10 raise to a power. The power begins from 0-1 less than the value of the variable digits. The first digits from the right has the power of 0, the second digit a power of 1 and the power increases till we get to the last number.
7. The result of (A) is assigned to variable convertedBase
8. If the targetBase is not a decimal(10), divide the inputNumber by the targetBase until the quotient is 0 and calculate the remainder each time. The destination base digits are the calculated remainders.
9. End loop
10. Print convertedBase
11. Stop