Activity 1

1. Read the question carefully and follow the input and output format.

In a given input number , find out the factorial of each individual digit and assign it to output array.

**Input and Output Format:** Input consists of a single integer. Output consists of an Integer array, the individual factorials.

Print "Number too large" when the given input numbers is greater than 32767 . Print "Number too small" when the given input is a negative number.

Include a function named digit Factorial(int number) whose return type is void. The output array is stored in a global variable named factorial.

**Sample Input 1:** 123

**Sample Output 1:** 1 2 6

2. Write a program to perform a specific arithmetic operation

Include a function named **perform Arithmetic Operation** that accepts 3 integer arguments and returns an integer that corresponds to the result. The first and second arguments correspond to the input numbers and the third argument corresponds to the choice of arithmetic operation.

If argument 3 =1, calculate the sum of input1 and input2

If argument 3 =2, calculate the difference of input1 and input2

If argument 3 =3, calculate the product of input1 and input2

If argument 3 =4, calculate the quotient of input1 divided by input 2

If the first two argument's values is negative or greater than 32767 , the function returns -1.

If the third argument's value is not in the range 1 to 4, the function returns -1.

If the function returns -1, print Invalid Input.

**Input and Output Format:**

Input consists of 3 integers.

Output consists of an integer.

Refer sample output for formatting specifications.

**Sample Input 1:**

4

12

3

**Sample Output 1:**

48

**Sample Input 2:**

-67

2

1

**Sample Output 2:**

Invalid Input

3. Write a program to find whether the given input year is a Leap Year.

Include a function named **check Leap Year** that accepts an integer and returns an integer. The function returns

1. 1 if the input is a Leap Year
2. 0 if the input is not a Leap Year
3. -1 if the input is a negative number

Print Invalid Input if the function returns -1.

**Input and Output Format:**

Input consists of a single integer.

Refer sample output for formatting specifications.

**Sample Input 1:**

2000

**Sample Output 1:**

yes

**Sample Input 2:**

1610

**Sample Output 2:**

no

**Sample Input 3:**

**-**2345

**Sample Output 3:**

Invalid Input