**DPPL LAB ASSIGNMENT-1**

# **MADE BY**: GROUP-47

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# **OBJECTIVE**:

# To Perform Addition and Subtraction of Large Numbers(Big Int) And Give Output.

# **CODE DESCRIPTION:**

# “Big\_int.h”

## Class “Big\_int” is created with two methods:

## Add

## Sub

## The “Add” and “Sub” public methods which take input two strings “Num1” and “Num2” and give the sum and difference respectively.

## Length of the strings is stored in “Len1” and “Len2” variables.

## Array Data structure is used to store input number and result.

## The individual digit is stored in the array using for loop.

## The lesser length array traversal is done using for loop and sum of corresponding indices is stored in result array.

## Sum variable is used to store the carry of the addition

## If the length of the two input arrays is same, the Sum variable is checked for carry and result is stored

## Otherwise if the length of arrays is unequal, then the larger array is traversed and result is stored in resultant array according to the value of Sum variable.

## The result is then printed using while loop.

## For Sub method, the steps are same till storing of input in Arrays.

## If the length of arrays is unequal, then the smaller length array is traversed and difference of corresponding indices is stored.

## The remaining elements of larger length array is stored according to carry in Flag variable.

## If the input length is equal, the numbers are compared using compare() method and the lesser number is subtracted from the larger number.

## The result is stored in “Arr3”

## The resultant array is traversed and output is printed.

# “TestMain.cpp”

# Utility main function is created to test the code with different values.

# Importing the “Big\_int” class created in file “Big\_int.h” to create object “Big” for “Add” & “Sub” methods.

# “Add” & “Sub” methods take Big Integers as input in the form of strings and returns addition & subtraction in the form of integers.

# Firstly, executed various testcases for Addition function & then for Subtraction function with the help of object “Big”.

# Finally, the code is successfully executing & producing the desired results.

**Thank You**