## Experiment No: 30

## **Experiment Name:** all Possible Sum from 2 array

## **Objective:**

* Briefly explain the purpose of the program.
* Describe the significance of finding all possible sums from two arrays.
* State the objectives of the lab report.

# **Code:**

#include <stdio.h>

int main() {

int size1, size2;

printf("Enter the size of the first array: ");

scanf("%d", &size1);

int array1[size1];

printf("Enter %d elements for the first array:\n", size1);

for (int i = 0; i < size1; i++) {

scanf("%d", &array1[i]);

}

printf("Enter the size of the second array: ");

scanf("%d", &size2);

int array2[size2];

printf("Enter %d elements for the second array:\n", size2);

for (int i = 0; i < size2; i++) {

scanf("%d", &array2[i]);

}

printf("All possible sums from two arrays:\n");

for (int i = 0; i < size1; i++) {

for (int j = 0; j < size2; j++) {

int sum = array1[i] + array2[j];

printf("%d + %d = %d\n", array1[i], array2[j], sum);

}

}

return 0;

}

# **Input:**

Enter the size of the first array: 2

Enter 2 elements for the first array:

1

1

Enter the size of the second array: 2

Enter 2 elements for the second array:

3

4

**Output:**

All possible sums from two arrays:

1 + 3 = 4

1 + 4 = 5

1 + 3 = 4

1 + 4 = 5

## **Discussion:**

* Discuss the advantages and limitations of using scanf for user input.
* Analyze how the structure of the loops influences the generation of sums.
* Address any challenges or potential improvements in the program.