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**PROGRAM DOING: COMPUTER ENGINEERING**

**YEAR: SECOND YEAR**

**REGISTRATION NUMBER: 16/X/2338/PS**

**Question Four**

1. Write a function named addarrays() that accepts two arrays that are the same size. The function should add each element in the arrays together and place the values in a third array.
2. Modify the function you created to return a pointer to the array containing the totals. Place this function in a program that also displays the values in all three arrays.

ANSWERS:

1. void addarrays(int array1[], int array2[], int summation\_array[], int SIZE)

{

for(int i=0;i<SIZE;i++)

{

summation\_array[i] = array1[i] + array2[i];

}

}

1. #include <stdio.h>

int \*addarrays(int array1[], int array2[], int SIZE);

main(){

int array1[] = {1,2,3,4,5};

int array2[] = {6,7,8,9,10};

int \*array3 = addarrays(array1, array2, 5);

for(int i=0;i<5;i++) {

printf("%d \n", array3[i]);

}

}

int \*addarrays(int array1[], int array2[], int length){

int \*destination\_array = malloc(length \* sizeof(int));

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

destination\_array[i] = array1[i] + array2[i];

}

return destination\_array;

}