

### Lab Question 3: Merging Two Arrays

Aim:

To write a C program to merge two arrays into a single array.

Algorithm:

1. Start the program.
2. Read two arrays A and B.
3. Create C to store merged result.
4. Copy all elements of A into C.
5. Append all elements of B to C.
6. Print merged array.
7. Stop.

Code:

```
#include <stdio.h>

int main() {
    int A[5] = {1,2,3,4,5}, B[5] = {6,7,8,9,10}, C[10], i, j;
    for (i = 0; i < 5; i++) C[i] = A[i];
    for (j = 0; j < 5; j++) C[i+j] = B[j];
    printf("Merged Array: ");
    for (i = 0; i < 10; i++) printf("%d ", C[i]);
    return 0;
}
```

Test Cases:

- A = [1,2,3], B = [4,5] → Output: [1,2,3,4,5]

Result:

The program merges two arrays successfully.