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#include <stdio.h>
#define SIZE 10
#define MERGED 20

// function prototype to merge listOne and listTwo
void mergeList(int *listOnePtr, size_t size1, int *listTwoPtr, size_t size2);

int main(void) {

    // declare listOne and listTwo
    int listOne[SIZE];
    int listTwo[SIZE];

    // declare pointers and initialize them to point to listOne and listTwo
    int *listOnePtr = &listOne[0];
    int *listTwoPtr = &listTwo[0];

    // initialize and print listOne
    puts("List one is:");

    for (size_t i = 0; i < SIZE; i++) {
        listOne[i] = i + 1;
        printf("%d ", listOne[i]);
    }

    // initialize and print listTwo
    puts("\n\nList two is:");

    for (size_t y = 0; y < SIZE; y++) {
        listTwo[y] = y + 11;
        printf("%d ", listTwo[y]);
    }

    // merge listOne and listTwo and print the merged list
    puts("\n\nThe merged list is:");

    mergeList(listOnePtr, SIZE, listTwoPtr, SIZE);

    puts("\n");

    system("pause");
}

// function to merge listOne and listTwo
void mergeList(int *listOnePtr, size_t size1, int *listTwoPtr, size_t size2) {

    int mergedList[MERGED]; // create mergedList

    int indexer; // indexer indexes through the lists
    indexer = 0;

    // put listOne into mergedList
    while (indexer < size1) {

        mergedList[indexer] = *listOnePtr;
        indexer++;
        listOnePtr++;
    }

    // put listTwo into mergedList
    while (indexer < MERGED) {

        mergedList[indexer] = *listTwoPtr;
        indexer++;
        listTwoPtr++;
    }

    // print the merged list
    for (int i = 0; i < MERGED; i++) {
        printf("%d ", mergedList[i]);
    }
}

```