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/**
 * A "pass-by-value" program where an array and its length are
 * passed to a function. A new array is created and each item of
 * the original array + 10 are inserted into this array. The new
 * array is then returned to the user.
 *
 * Printing functions are only for comparing arrays.
 *
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 * @version 0.02
 */
#include <stdio.h>
#include <stdlib.h>
#define FOO 5
int * arr_add_10(int arr[], int len);

int main()
{
    int a[FOO] = {1,2,3,4,5};
    int *b;
    b = arr_add_10(a, FOO);

    // print out elements to test

    printf("\na: ");
    for (int j = 0; j < FOO; ++j)
        printf("%d ", a[j]);

    printf("\nb: ");
    for (int i = 0; i < FOO; ++i)
        printf("%d ", b[i]);
    printf("\n");

    free(b);
    return 0;
}

int * arr_add_10(int arr[], int len)
{
    // copy the arr
    int *new_arr = malloc(sizeof(int) * len);

    // add 10 to each element
    for (int i = 0; i < len; ++i)
        new_arr[i] += arr[i] + 10;

    return new_arr;
}
```