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Problem 1: Write a function in C language to sort of a list integers; the order of sorting (i.e. ascending or descending) will be passed to the function as argument.

Solve:

#include <stdio.h>

void sort(int \*arr, int size, int order);

int main(){

int size, order;

size = 10;

int arr[10];

printf("Enter the elements of the array: ");

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

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

}

printf("Enter the order of sorting (1 for ascending, 0 for descending): ");

scanf("%d", &order);

sort(arr, size, order);

printf("The sorted array is: ");

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

printf("%d ", arr[i]);

}

printf("\n");

return 0;

}

void sort(int \*arr, int size, int order){

int temp;

if (order == 1){

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

for (int j = i + 1; j < size; j++){

if (arr[i] > arr[j])

{

temp = arr[j];

arr[j] = arr[i];

arr[i] = temp;

}

}

}

}

else{

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

for (int j = i + 1; j < size; j++){

if (arr[i] < arr[j])

{

temp = arr[j];

arr[j] = arr[i];

arr[i] = temp;

}

}

}

}

}

Problem 2: Write a C function to determine the LCM of given two integers.

Write a complete C program to determine the LCM of any set of integers using this function.

Solve:

#include <stdio.h>

int lcm(int a, int b);

int main(){

int n, a, b;

printf("How many integers do you want to find the LCM of?: ");

scanf("%d", &n);

printf("Enter the integers: ");

scanf("%d %d", &a, &b);

int l = lcm(a, b);

for (int i = 2; i < n; i++){

scanf("%d", &a);

l = lcm(l, a);

}

printf("The LCM is %d\n", l);

return 0;

}

int lcm(int a, int b){

int i = 1;

while (1){

if (i % a == 0 && i % b == 0)

{

return i;

}

i++;

}

}