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PROBLEM STATEMENT 2

given an array A of positive integers .your task is to find the leaders in the array . an element of array is a leader if it is greater than or equal to all the elements to its right side the rightmost element is always a leader your task : you dont need to read input or print anything. the task is to complete the function leader() which takes array A and n as input parameters and returns an array of leader in order of their apperance

#include <stdio.h>

#include <stdlib.h>

int\* leader(int A[], int n) {

int i;

int\* leaders = (int\*)malloc(sizeof(int) \* n);

int max\_right = A[n - 1];

int leader\_count = 0;

for ( i = n - 1; i >= 0; i--) {

if (A[i] >= max\_right) {

leaders[leader\_count++] = A[i];

max\_right = A[i];

}

}

leaders = (int\*)realloc(leaders, sizeof(int) \* leader\_count);

for ( i = 0; i < leader\_count / 2; i++) {

int temp = leaders[i];

leaders[i] = leaders[leader\_count - i - 1];

leaders[leader\_count - i - 1] = temp;

}

return leaders;

}

int main() {

int i;

int A[] = {16, 17, 4, 3, 5, 2};

int n = sizeof(A) / sizeof(A[0]);

int\* leaders = leader(A, n);

printf("Leaders: ");

for ( i = 0; i < n; i++) {

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

}

printf("\n");

free(leaders);

return 0;

}

OUTPUT :

