1. Write a function to rotate an array to the right by k steps.The function should modify the array in place to achieve the rotation.

#include <iostream>

#include <vector>

using namespace std;

// reversing funcion

void reverse(vector<int>& nums, int start, int end) {

while (start < end) {

swap(nums[start], nums[end]);

start++;

end--;

}

}

void rotate(vector<int>& nums, int k) {

int n = nums.size();

k = k % n;

if (k == 0) return;

// Reverse the entire array

reverse(nums, 0, n-1);

// Reverse the first k elements

reverse(nums, 0, k-1);

// Reverse the remaining elements

reverse(nums, k, n-1);

}

void printArray(vector<int> nums){

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

cout << nums[i] << " ";

}

cout << endl;

}

int main() {

vector<int> nums = {1, 2, 3, 4, 5, 6, 7};

int k = 3;

cout << "Original array: ";

printArray(nums);

rotate(nums, k);

cout << "Array after rotation: ";

printArray(nums);

return 0;

}

OUTPUT

