1. Find the Minimum and Maximum elements in an array.

Answer:

#include<stdio.h>

int main(){

int array[100],i,n;

printf("How many elements:");

scanf("%d",&n);

printf("Enter elements:");

scanf("%d",&array[0]);

int min=array[0];

int max=array[0];

for (i=1;i<n;i++){

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

if (min>array[i]){

min=array[i];

}

if (max<array[i]){

max=array[i];

}

}

printf("Minimum=%d\n",min);

printf("Maximum=%d\n",max);

return 0;

}

1. Reverse the array.

Answer:

#include<stdio.h>

int main(){

int i,array[5]={6,2,8,3,4};

printf("Reversed array elements:");

for (i=4;i>=0;i--){

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

}

return 0;

}

1. Cyclically rotate an array by one.

Answer:

#include <stdio.h>

int main(){

int i,n=5;

int array[5]={1,2,3,4,5};

printf("Cyclically rotate an array:");

int last=array[n-1];

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

array[i]=array[i-1];

}

array [0]=last;

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

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

}

return 0;

}

1. Sort an array.

Answer:

#include <stdio.h>

int main() {

int World,i,j,a[5] = {5,2,4,3,1};

for (i = 0; i < 5; i++) {

for (j = i + 1; j < 5; j++) {

if (a[i] > a[j]) {

World = a[i];

a[i] = a[j];

a[j] = World;

}

}

}

printf("Sorted array : ");

for (i = 0; i < 5; i++) {

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

}

return 0;

}

1. Find Duplicates in an array.

Answer:

#include <stdio.h>

int main() {

int n = 10, i, j;

int a[10] = {2, 10, 10, 100, 2, 10, 11, 2, 11, 2};

printf("Duplicates in the array are: ");

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

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

if (a[i] == a[j]) {

break;

}

}

if (i == j) {

for (j = i + 1; j < n; j++) {

if (a[i] == a[j]) {

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

break;

}

}

}

}

return 0;

}

1. Count number of occurrences in a sorted array.

Answer:

#include <stdio.h>

int main() {

int a[7] = {1, 1, 2, 2, 2, 2, 3};

int i, ctr = 0, ctr1 = 0, ctr2 = 0;

for (i = 0; i < 7; i++){

if (a[i] == 1){

ctr++;

}

else if (a[i] == 2){

ctr1++;

}

else if (a[i] == 3){

ctr2++;

}

}

printf("1 occurred %d times.\n", ctr);

printf("2 occurred %d times.\n", ctr1);

printf("3 occurred %d times.\n", ctr2);

return 0;

}

1. Sort the array of 0s,1s,2s.

Answer:

#include<stdio.h>

int main(){

int n=11,low=0,mid=0,high=10, a[]={0,1,2,1,0,2,1,1,0,0,0};

while(mid<=high){

if(a[mid]==0)

{

int temp=a[low];

a[low]=a[mid];

a[mid]=temp;

mid++;

low++;

}

else if (a[mid]==1){

mid++;

}

else

{

int t=a[mid];

a[mid]=a[high];

a[high]=t;

high--;

}

}

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

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

}

return 0;

}

1. Move all the Negative Elements to one side of the array.

Answer:

#include <stdio.h>

int main() {

int arr[] = {-8, 5, -3,9, 4, -6, -7};

int n = 7;

int r;

for (int i = 0; i < 7; i++) {

for (int j = i + 1; j < 7; j++) {

if (arr[i] > 0 && arr[j] < 0) {

r = arr[i];

arr[i] = arr[j];

arr[j] = r;

}

}

}

for (int i = 0; i < 7; i++) {

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

}

return 0;

}

1. Find the row with a maximum number of 1’s .

Answer:

#include <stdio.h>

int main() {

int a[4][4] = { {0, 0, 0, 1},

{1, 1, 1, 1},

{0, 1, 1, 1},

{0, 0, 1, 1} };

int c1 = 0, c2 = 0, c3 = 0, c4 = 0;

for (int j = 0; j < 4; j++) {

if (a[0][j] == 1) {

c1++;

}

if (a[1][j] == 1) {

c2++;

}

if (a[2][j] == 1) {

c3++;

}

if (a[3][j] == 1) {

c4++;

}

}

if(c1>c2&&c1>c3&&c1>>c4){

printf("the maximun 1 is in row=1 %d times\n",c1);

}

if(c2>c1&&c2>c3&&c2>>c4){

printf("the maximun 1 is in row=2 %d times" ,c2);

}

if(c3>c2&&c3>c1&&c3>>c4){

printf("the maximun 1 is in row=3 %d times",c3);

}

if(c4>c2&&c4>c3&&c4>>c1){

printf("the maximun 1 is in row=4 %d ",c4);

}

return 0;

}

1. Majority element.

Answer:

#include <stdio.h>

int main() {

int A[6] = {1, 2, 2, 4,5, 3};

int c1 = 0, c2 = 0, c3 = 0;

for (int i = 0; i < 6; i++) {

if (A[i] == 1) {

c1++;

}

else if (A[i] == 2) {

c2++;

}

else if (A[i] == 3) {

c3++;

}

}

if (c1 > 3) {

printf( "Maximum count is of 1: %d\n",c1) ;

}

else if (c2 >3) {

printf( "Maximum count is of 2: %d\n",c2);

}

else if (c3 >3) {

printf( "Maximum count is of 3: %d\n",c3);

}

else

printf( "there is no majority integers= -1\n" );

return 0;

}

1. Wave array.

Answer:

#include <stdio.h>

int main()

{

int array[] = {7, 8, 2, 1, 5, 13};

int temp;

for (int i = 0; i < 6- 1; i++)

{

for (int j = i + 1; j < 6; j++)

{

if (array[i] > array[j]){

temp = array[i];

array[i] = array[j];

array[j] = temp;}

}

}

for (int i = 0; i < 6; i = i + 2)

{

temp = array[i];

array[i] = array[i + 1];

array[i + 1] = temp;

}

for (int i = 0; i < 6; i++)

{

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

}

return 0;

}