Sort an array of 0s, 1s and 2s

#include<iostream>

using namespace std;

void segregate(int a[10],int n)

{

int b[10],p=0,q=0;

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

{

if(a[i] == 0)

p++;

else if(a[i] == 1)

q++;

}

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

b[i] = 0;

for(int i=p;i<p+q;i++)

b[i] = 1;

for(int i=p+q;i<n;i++)

b[i] = 2;

cout<<"The segregated array is ";

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

cout<<b[i]<<" ";

}

int main()

{

int a[10],n;

cout<<"Enter the number of elements ";

cin>>n;

cout<<"Enter the array elements either 0 or 1: ";

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

cin>>a[i];

segregate(a,n);

return 0;

}