University of Asia Pacific

H.W.__1(CSE-108)

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Sec: C-2

Course:CSE-108

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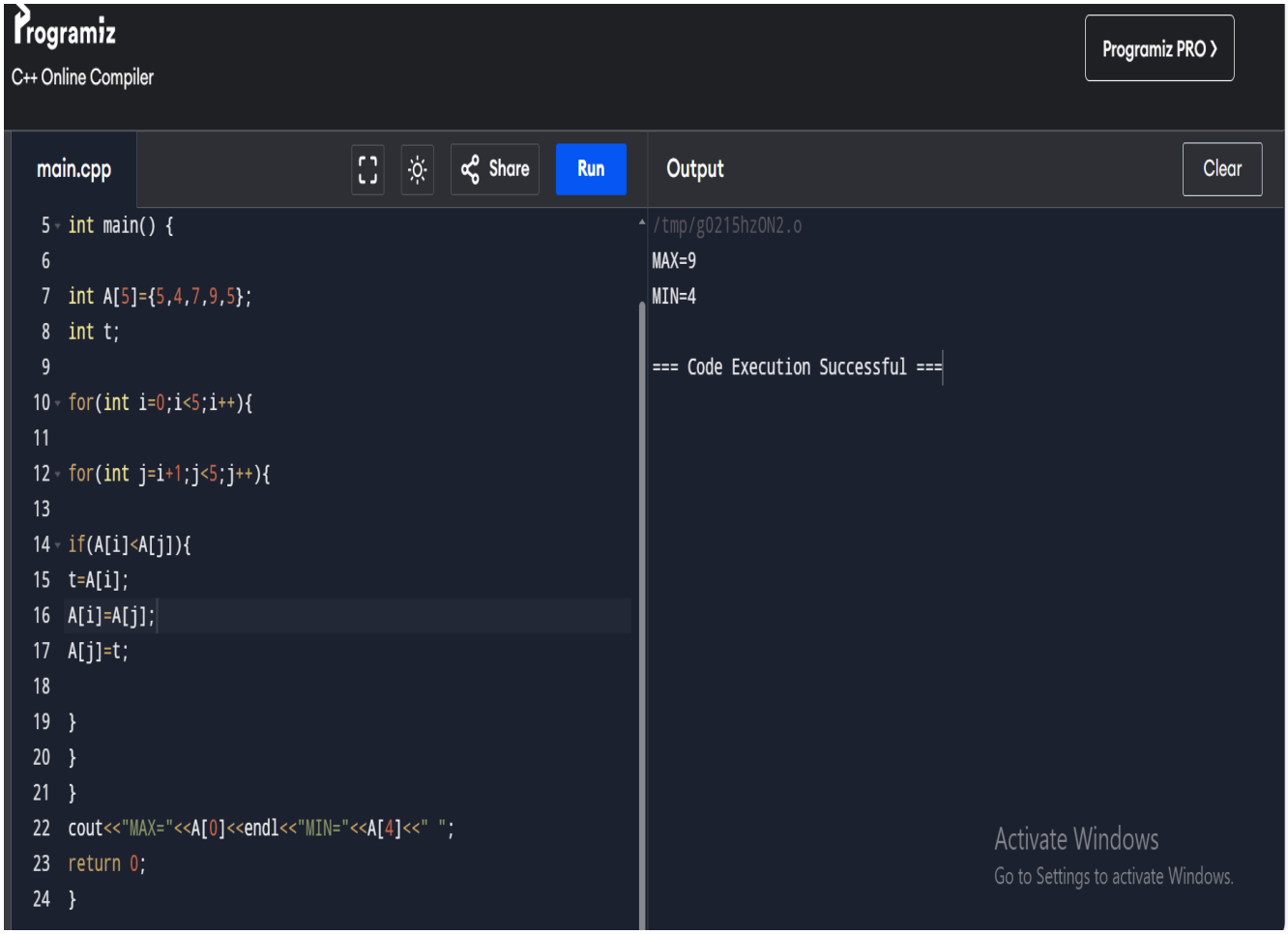
//1::Program to find the minimum (or maximum) element of an array

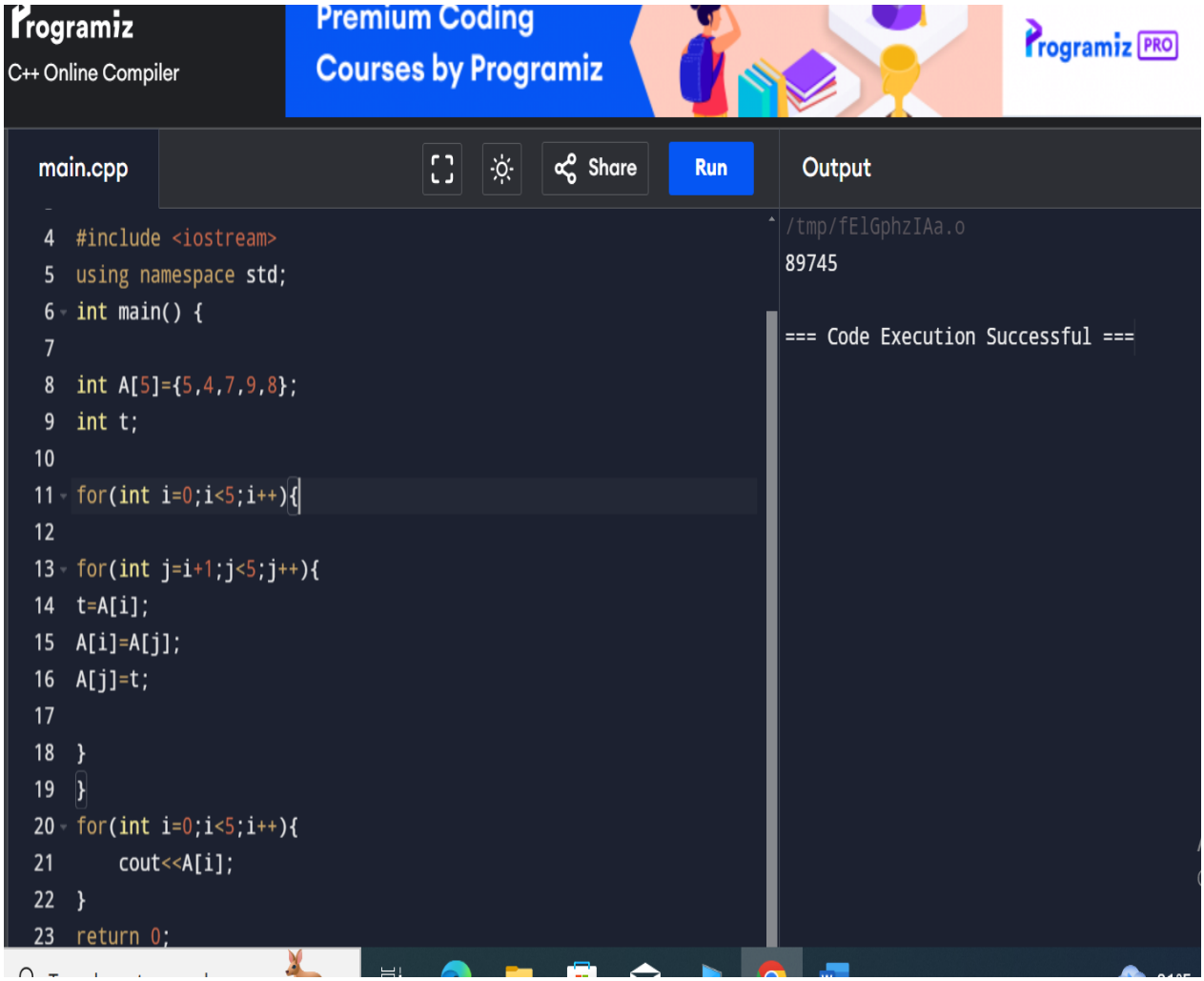
```
#include <iostream>
using namespace std;
int main() {

int A[5]={5,4,7,9,5};
int t;

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

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

if(A[i]<A[j]){
t=A[i];
A[i]=A[j];
A[j]=t;

}
}
}
cout<<"MAX="<<A[0]<<endl<<"MIN="<<A[4]<<" ";
return 0;
}
```



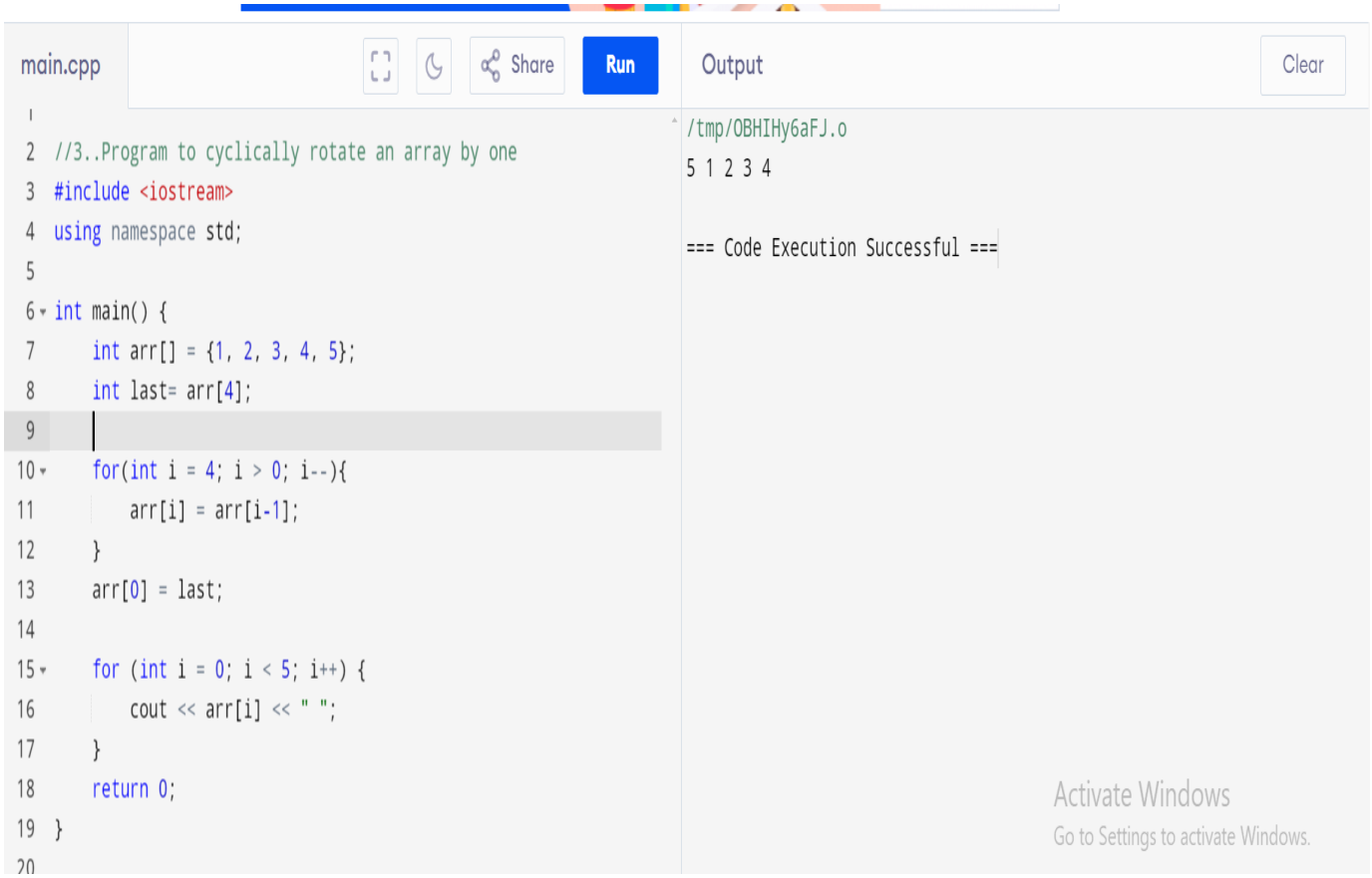
//2::Program to reverse a array

```
#include <iostream>
using namespace std;
int main() {

int A[5]={5,4,7,9,8};
int t;

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

for(int j=i+1;j<5;j++){
t=A[i];
A[i]=A[j];
A[j]=t;

}
}
for(int i=0;i<5;i++){
    cout<<A[i];
}
return 0;
```

}

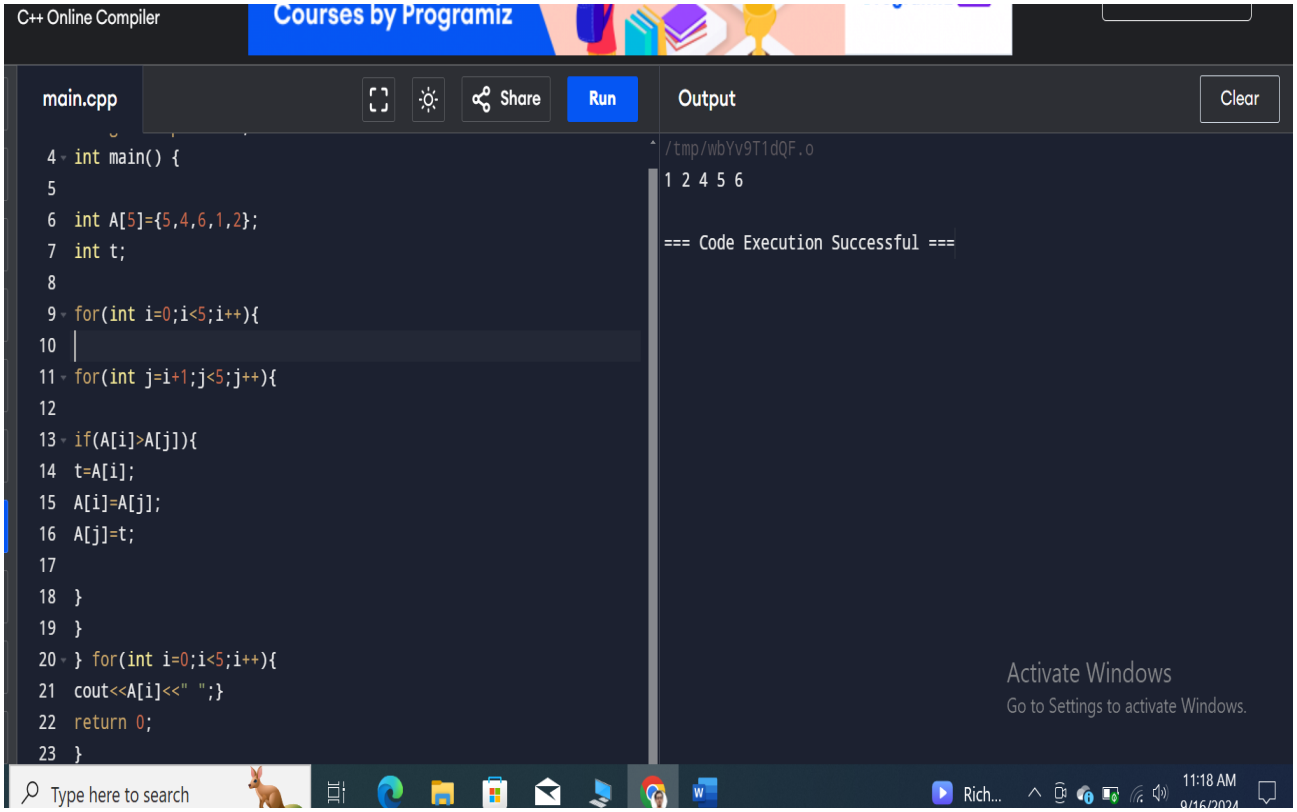



```
//3..Program to cyclically rotate an array by one
#include <iostream>
using namespace std;

int main() {
    int arr[] = {1, 2, 3, 4, 5};
    int last= arr[4];

    for(int i = 4; i > 0; i--){
        arr[i] = arr[i-1];
    }
    arr[0] = last;

    for (int i = 0; i < 5; i++) {
        cout << arr[i] << " ";
    }
    return 0;
}
```



//4::Program to Sort an Array in Ascending Order

```
#include <iostream>
using namespace std;
int main() {

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

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

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

if(A[i]>A[j]){
t=A[i];
A[i]=A[j];
A[j]=t;}
}
} for(int i=0;i<5;i++){
cout<<A[i]<<" ";}
return 0;
}
```




```
//5..Find duplicate elements in an array
#include <iostream>
using namespace std;

int main() {
    int arr[] = {1,1,3,3,5,6,6,7,7};
    int i,j;

    for(int i = 0; i<10 ; i++){
        for(int j= i+1; j<10 ; j++){
       if(arr[i]==arr[j]){
    cout<<"duplicate elements is="<<arr[i]<<" "<<endl;}
    }
     }
    return 0;
}
```

main.cpp | Share | Run | Output

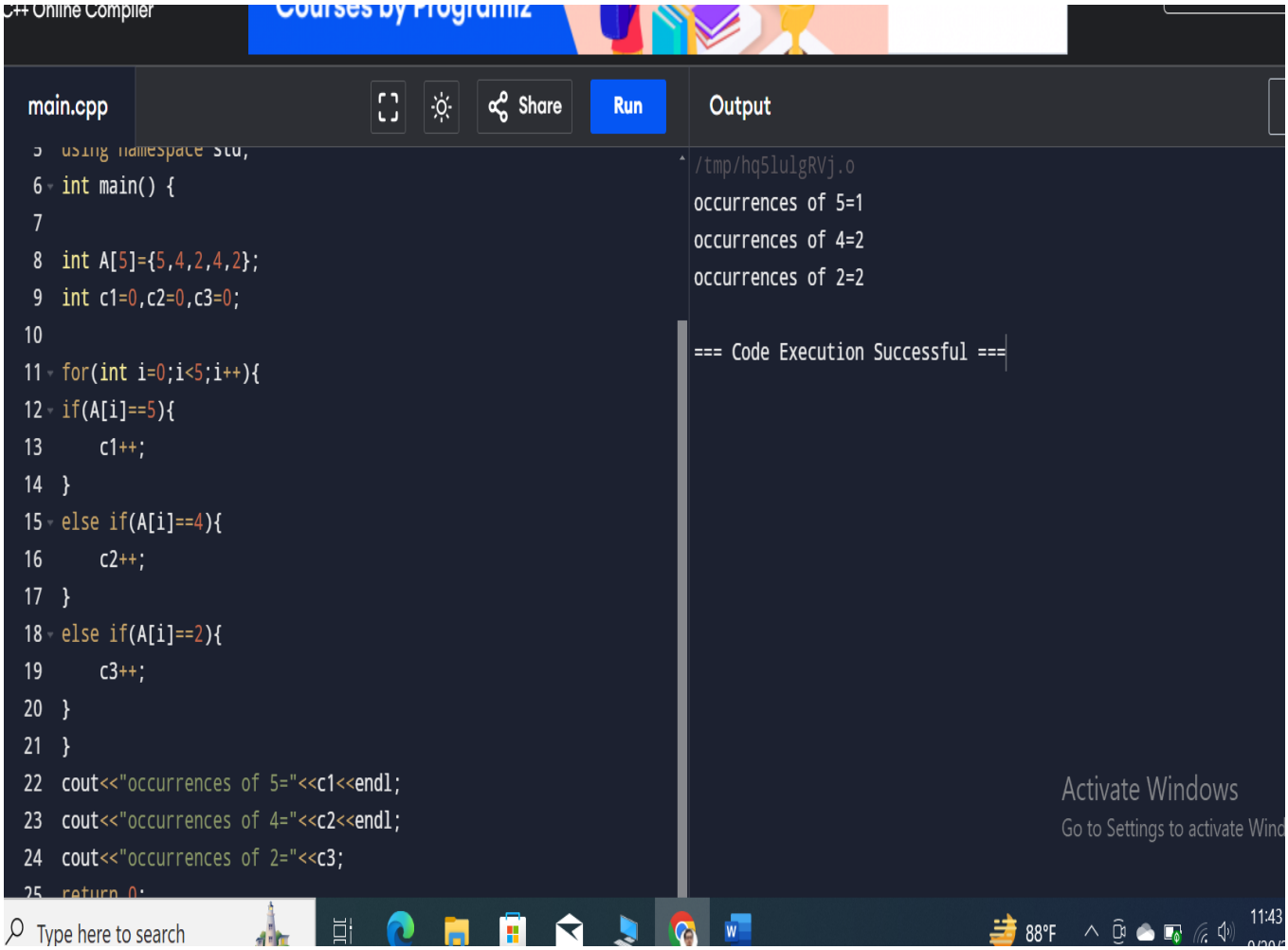
```cpp
//5..Find duplicate elements in an array
#include <iostream>
using namespace std;

int main() {
    int arr[] = {1,1,3,3,5,6,6,7,7};
    int i,j;

    for(int i = 0; i<10 ; i++){
        for(int j= i+1; j<10 ; j++){
       if(arr[i]==arr[j]){
    cout<<"duplicate elements is="<<arr[i]<<" "<<endl;}
    }
     }
    return 0;
}
```

```
/tmp/pXwA1HkVQB.o
duplicate elements is=1
duplicate elements is=3
duplicate elements is=6
duplicate elements is=7


=== Code Execution Successful ===
```


//6::Count number of occurrences (or frequency) in a sorted array

```
#include <iostream>
using namespace std;
int main() {

int A[5]={5,4,2,4,2};
int c1=0,c2=0,c3=0;

for(int i=0;i<5;i++){
if(A[i]==5){
   c1++;
}
else if(A[i]==4){
   c2++;
}
else if(A[i]==2){
   c3++;
}
}
cout<<"occurrences of 5="<<c1<<endl;
cout<<"occurrences of 4="<<c2<<endl;
cout<<"occurrences of 2="<<c3;
return 0;
```

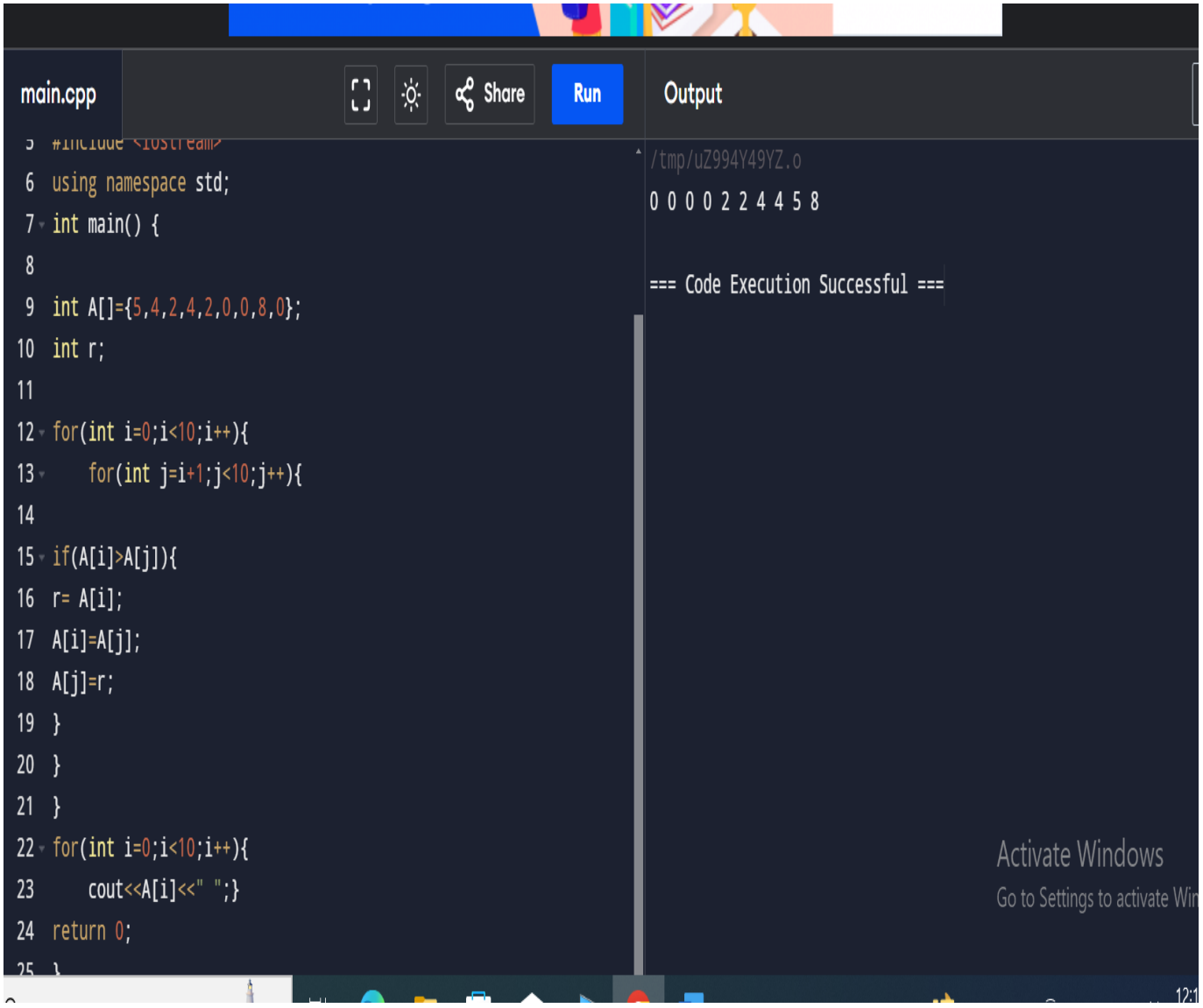
}



//7::Sort an array of 0s, 1s and 2s | Dutch National Flag problem

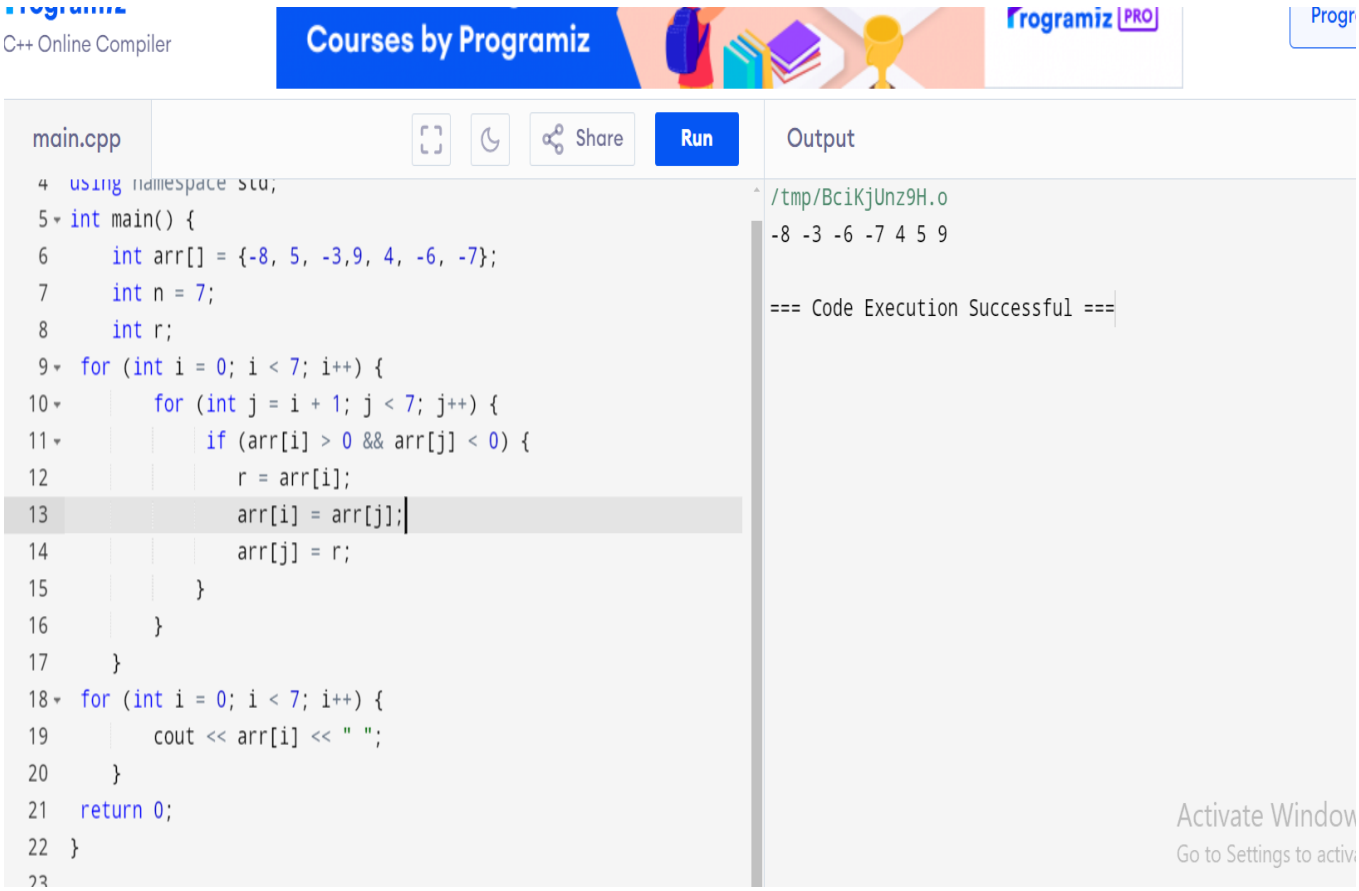
```
#include <iostream>
using namespace std;
int main() {

int A[]={5,4,2,4,2,0,0,8,0};
int r;

for(int i=0;i<10;i++){
    for(int j=i+1;j<10;j++){

if(A[i]>A[j]){
r= A[i];
A[i]=A[j];
A[j]=r;
}
}
}
```

```
for(int i=0;i<10;i++){
   cout<<A[i]<<" ";}
return 0;
}
```




```
//8..Move all negative numbers to beginning and positive to end
#include <iostream>
using namespace std;
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];
```

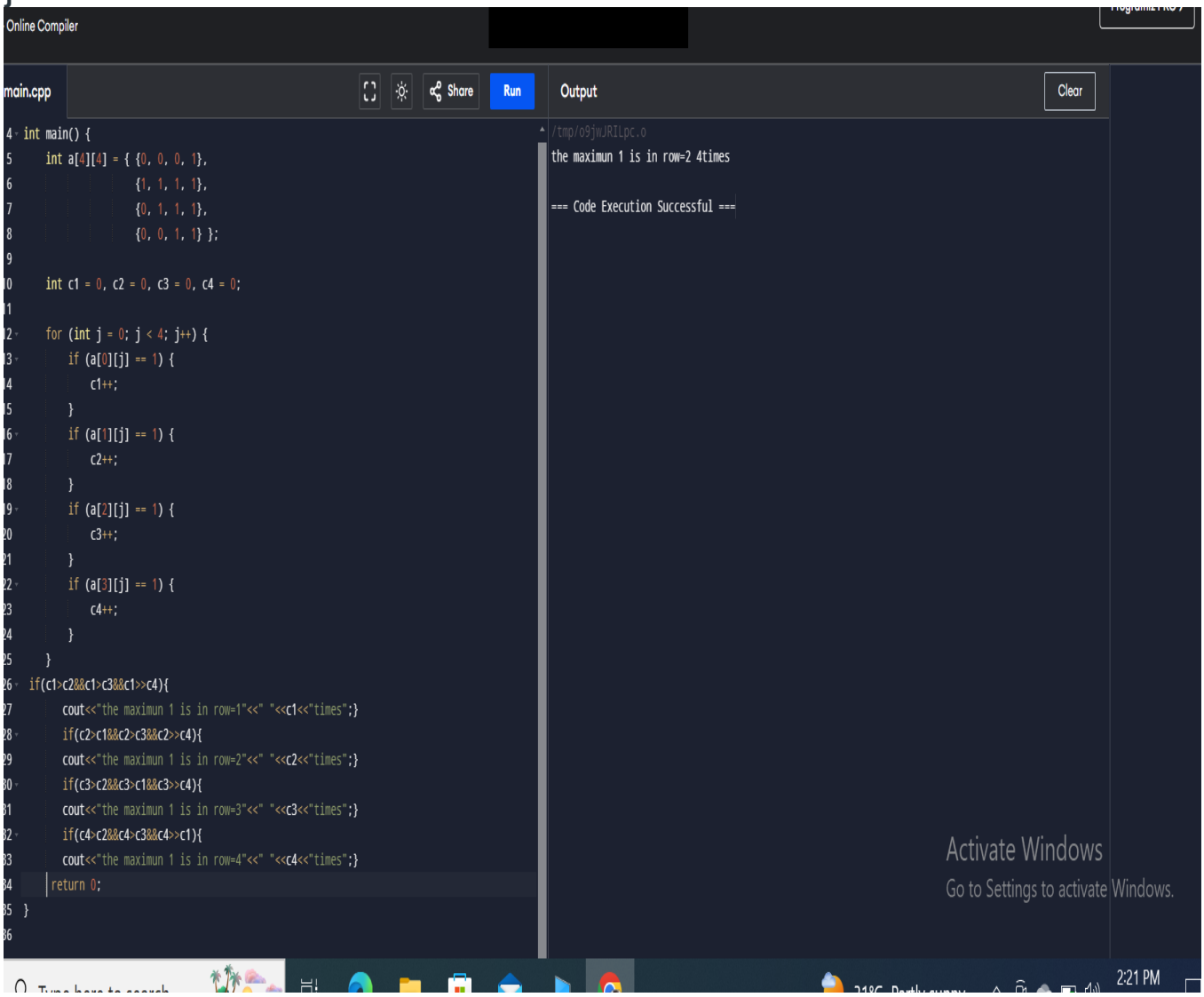
```
            arr[i] = arr[j];
            arr[j] = r;
        }
    }
  }
 for (int i = 0; i < 7; i++) {
      cout << arr[i] << " ";
  }
 return 0;
}
```




```
//9..Find the row with maximum number of 1s
#include <iostream>
using namespace std;

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) {
```

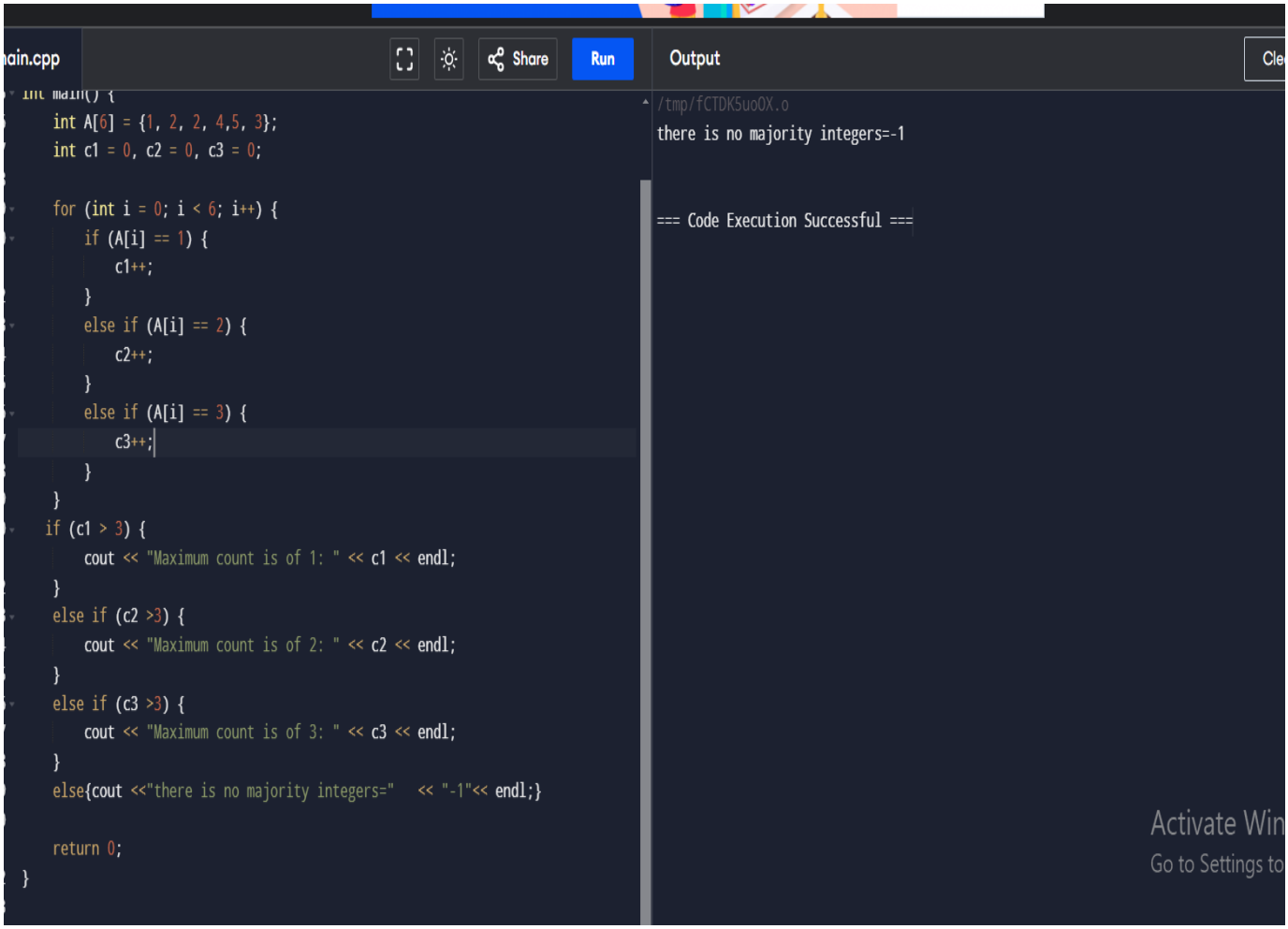
```
            c1++;
        }
        if (a[1][j] == 1) {
            c2++;
        }
        if (a[2][j] == 1) {
            c3++;
        }
        if (a[3][j] == 1) {
            c4++;
        }
    }
if(c1>c2&&c1>c3&&c1>>c4){
      cout<<"the maximun 1 is in row=1"<<" "<<c1<<"times";}
      if(c2>c1&&c2>c3&&c2>>c4){
      cout<<"the maximun 1 is in row=2"<<" "<<c2<<"times";}
      if(c3>c2&&c3>c1&&c3>>c4){
      cout<<"the maximun 1 is in row=3"<<" "<<c3<<"times";}
      if(c4>c2&&c4>c3&&c4>>c1){
      cout<<"the maximun 1 is in row=4"<<" "<<c4<<"times";}
    return 0;
```

}



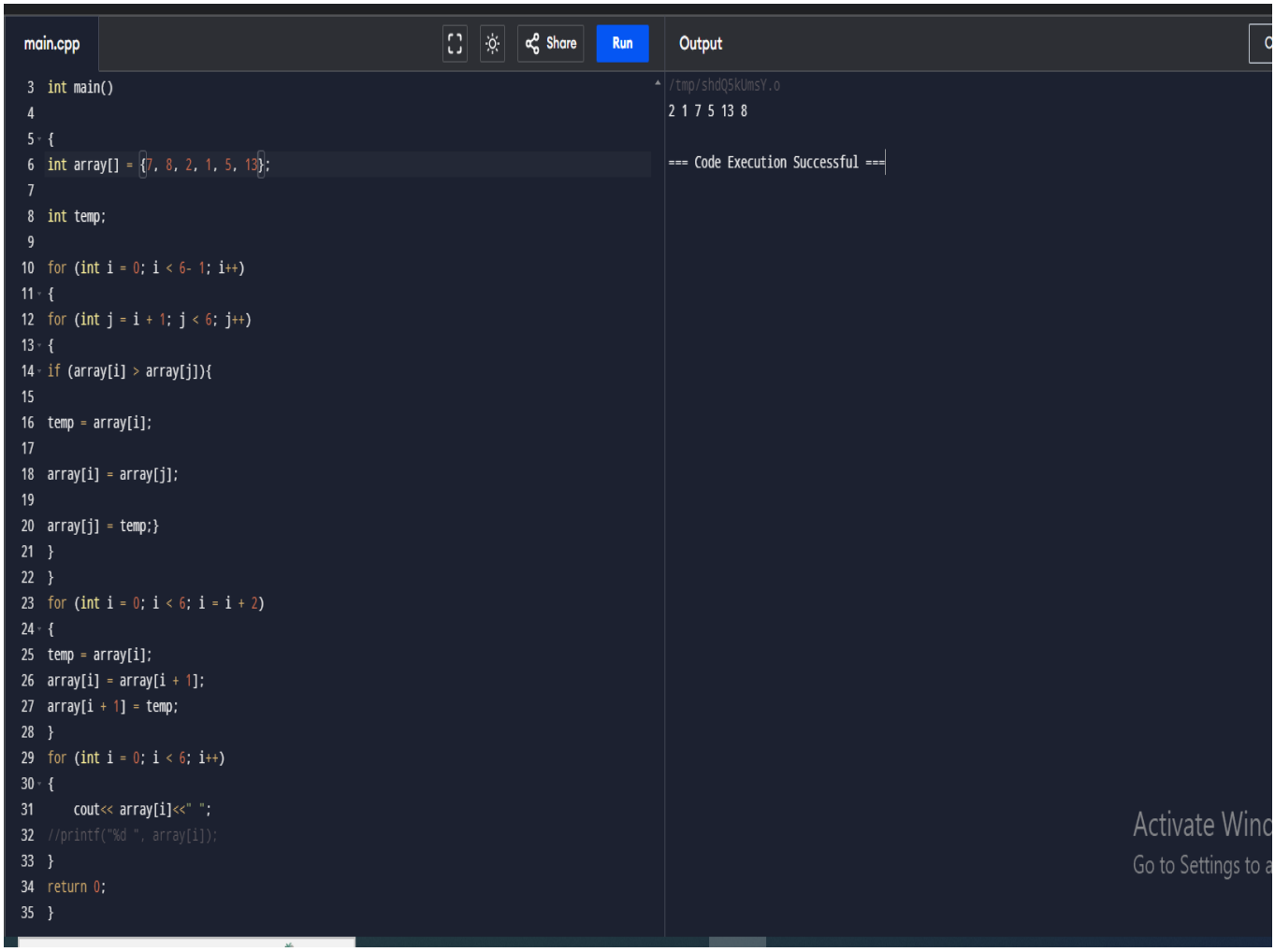

```
//10..Majority Element(element must be greater than the half of the array size)
#include <iostream>
using namespace std;

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) {
       cout << "Maximum count is of 1: " << c1 << endl;
    }
    else if (c2 >3) {
       cout << "Maximum count is of 2: " << c2 << endl;
    }
    else if (c3 >3) {
       cout << "Maximum count is of 3: " << c3 << endl;
    }
    else{cout <<"there is no majority integers="   << "-1"<< endl;}

    return 0;
}
```




```
//11..Sort an array in wave form
#include <iostream>
using namespace std;
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++)
{
    cout<< array[i]<<" ";
//printf("%d ", array[i]);
}
return 0;
}
```


main.cpp
Share
Run
Output
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++)
{
cout<< array[i]<<" ";
//printf("%d ", array[i]);
}
return 0;
}
/tmp/shdQ5kUmsY.o
2 1 7 5 13 8
=== Code Execution Successful ===
Activate Wind
Go to Settings to a