

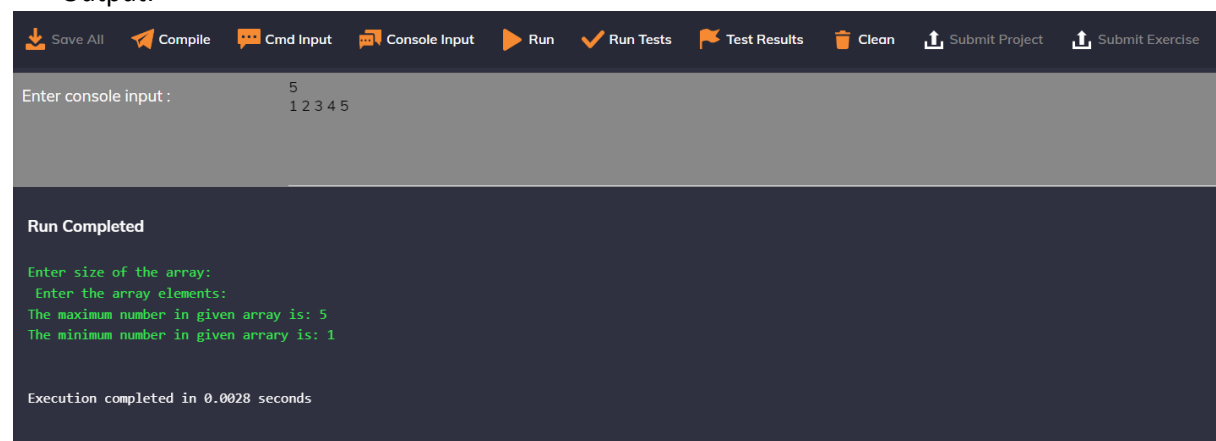
7a. Write a C program, to find both the largest and smallest number in a list of integers using an Array.

b. Write a C program, to add two matrices using an Array.

c. Write a C program, to multiply two matrices using an Array.

```
a. #include <stdio.h>
#include <math.h>
int main()
{
    int i,min,max,size,a[20];
    printf("Enter size of the array:\n ");
    scanf("%d",&size);
    printf("Enter the array elements:\n");
    for(i=0; i<size; i++)
    {
        scanf("%d\n", &a[i]);
    }
    max=a[0];
    min=a[0];
    for(i=1;i<size;i++)
    {
        if(a[i]>max)
            max=a[i];
        if(a[i]<min)
            min=a[i];
    }
    printf("The maximum number in given array is: %d\n",max);
    printf("The minimum number in given array is: %d\n",min);
    return 0;
}
```

Output:



```
Save All  Compile  Cmd Input  Console Input  Run  Run Tests  Test Results  Clean  Submit Project  Submit Exercise

Enter console input :      5
                        1 2 3 4 5

Run Completed

Enter size of the array:
Enter the array elements:
The maximum number in given array is: 5
The minimum number in given array is: 1

Execution completed in 0.0028 seconds
```

b. #include <stdio.h>

#include <math.h>

void main()

{

int a[2][2], b[2][2];

int i,j;

```

printf("Enter elements of matrix A:\n");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
scanf("%d",&a[i][j]);
}
printf("Enter elements of matrix B:\n");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
scanf("%d",&b[i][j]);
}
printf("\n =====Matrix Addition===== \n");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
printf("%5d",a[i][j]+b[i][j]);
printf("\n");
}
}
}

```

Output:

The screenshot shows a C++ IDE interface with a toolbar at the top containing icons for Save All, Compile, Cmd Input, Console Input, Run, Run Tests, Test Results, Clean, Submit Project, and Submit Exercise. The console area displays the following text:

```

Enter console input :      1 2
                        3 4

                        5 6
                        7 8

Run Completed

Enter elements of matrix A:
Enter elements of matrix B:

=====Matrix Addition=====
 6   8
10  12

Execution completed in 0.0032 seconds

```

c. `#include<stdio.h>`
`#include<stdlib.h>`
`int main(){`
`int a[2][2],b[2][2],c[2][2],i,j,k;`
`printf("enter the first matrix element=\n");`
`for(i=0;i<2;i++)`
`{`
`for(j=0;j<2;j++)`
`{`
`scanf("%d",&a[i][j]);`
`}`
`}`
`printf("enter the second matrix element=\n");`
`for(i=0;i<2;i++)`

```

{
for(j=0;j<2;j++)
{
scanf("%d",&b[i][j]);
}
}

printf("multiply of the matrix=\n");
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
c[i][j]=0;
for(k=0;k<2;k++)
{
c[i][j]+=a[i][k]*b[k][j];
}
}
}
//for printing result
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
printf("%d\t",c[i][j]);
}
printf("\n");
}
return 0;
}

```

The screenshot shows a C++ IDE interface. At the top, there is a toolbar with icons for Save All, Compile, Cmd Input, Console Input, Run, Run Tests, Test Results, Clean, Submit Project, and Submit Exercise. Below the toolbar, the console window displays the following text:

```

Enter console input :      3 4
                          2 1
                          1 5
                          3 7

```

Below the console input, the output window shows the results of the program execution:

```

Run Completed

enter the first matrix element=
enter the second matrix element=
multiply of the matrix=
15      43
5       17

Execution completed in 0.0027 seconds

```