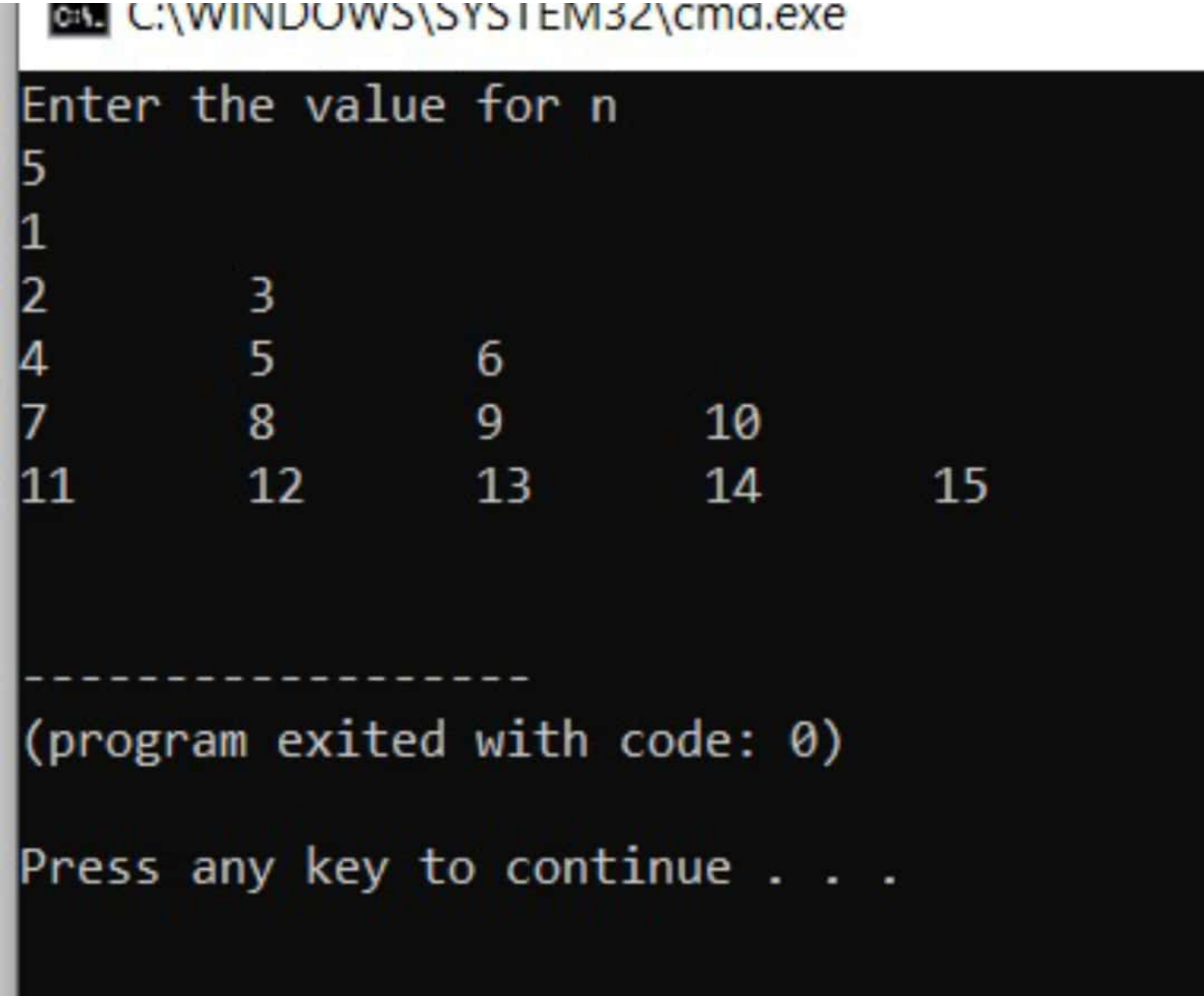
```c
#include<stdio.h>
int main()
{
    int n,i,j,ctr=1;
    printf("Enter the value for n\n");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        for(j=1;j<=i;j++)
        {
            printf("%d\t",ctr);
            ctr++;
        }
        printf("\n");
    }
    return 0;
}
```



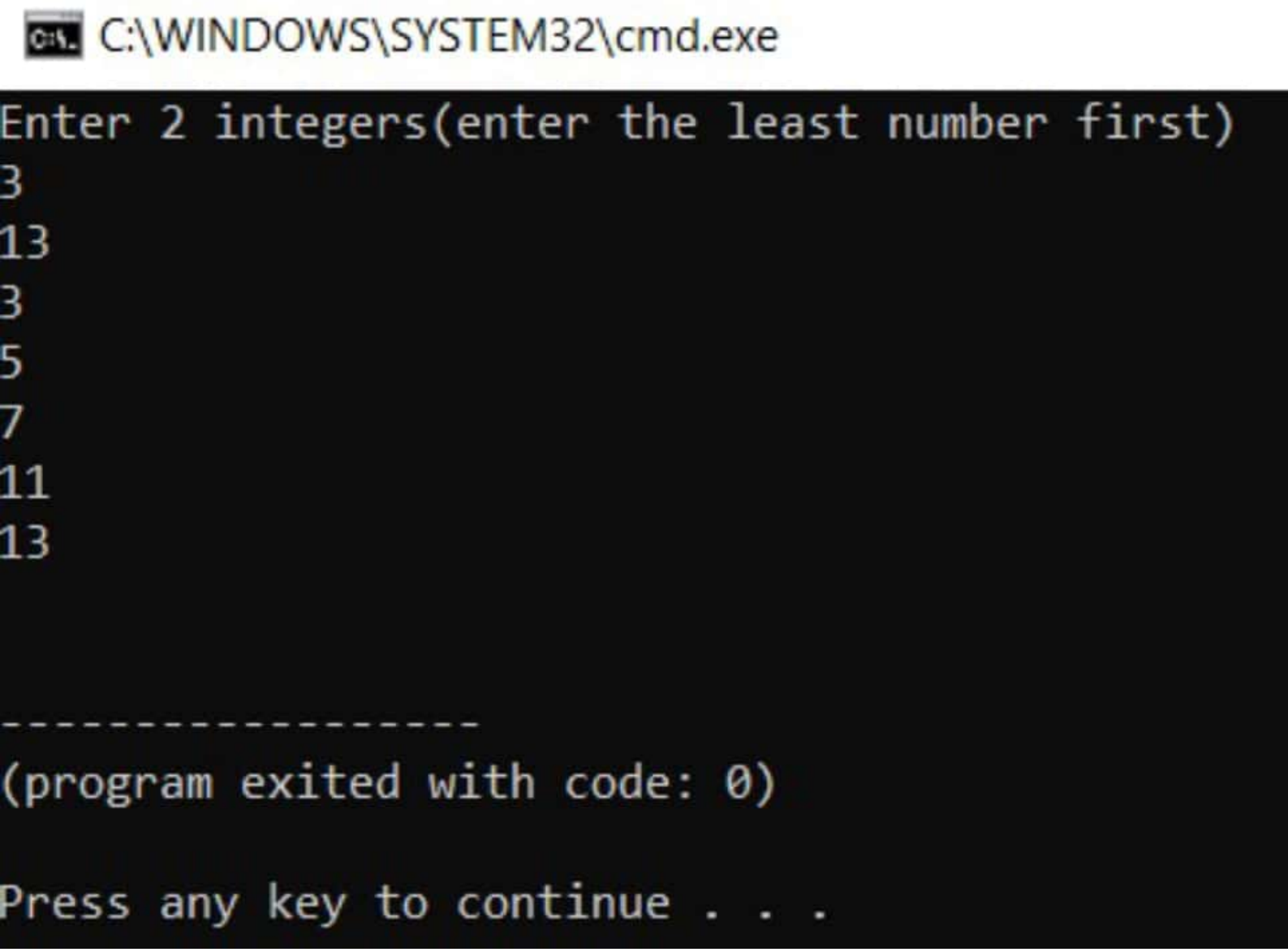
```c
#include<stdio.h>
int main()
{
    int cie,see,total;
    printf("Enter CIE marks out of 50 and SEE marks out of 100\n");
    scanf("%d%d",&cie,&see);
    total=cie+(see/2);
    if(total>=90)
    printf("S grade\n");
    else if(total>=80)
    printf("A grade\n");
    else if(total>=70)
    printf("B grade\n");
    else if(total>=60)
    printf("C grade\n");
    else if(total>=50)
    printf("D grade\n");
    else if(total>=40)
    printf("E grade\n");
    else if(total<40)
    printf("F grade\n");
    return 0;
}
```

```
Enter CIE marks out of 50 and SEE marks out of 100
40
40
C grade


------------------
(program exited with code: 0)

Press any key to continue . . .
```

```c
#include<stdio.h>
int main()
{
    int a,b,i,j,nof;
    printf("Enter 2 integers(enter the least number first)\n");
    scanf("%d%d",&a,&b);
    for(i=a;i<=b;i++)
    {
        nof=0;
        for(j=1;j<=i;j++)
        {
            if(i%j==0)
            nof++;
        }
        if(nof==2)
        printf("%d\n",i);
    }
    return 0;
}
```



```c
#include<stdio.h>
#include<math.h>
int main()
{
    int b,p=1;
    float r,h,a,v;
    while(p==1)
    {
        printf("Enter the number\n");
        printf("1-Cylinder\n2-Cone\n3-Sphere\n0-Stop\n");
        scanf("%d",&b);
        if(b==0)
        break;
        switch(b)
        {
            case 1:
            {
                printf("Enter radius and height\n");
                scanf("%f%f",&r,&h);
                a=(2*3.14*r*h)+(2*3.14*r*r);
                v=3.14*r*r*h;
                printf("Area=%f, Volume=%f\n",a,v);
            }
            break;
            case 2:
            {
                printf("Enter radius and height\n");
                scanf("%f%f",&r,&h);
                a=(3.14*r)*(r+sqrt((h*h)+(r*r)));
                v=(3.14*r*r*h)/3;
                printf("Area=%f, Volume=%f\n",a,v);
            }
            break;
            case 3:
            {
                printf("Enter radius\n");
```

```
17              {
18                  printf("Enter radius and height\n");
19                  scanf("%f%f",&r,&h);
20                  a=(2*3.14*r*h)+(2*3.14*r*r);
21                  v=3.14*r*r*h;
22                  printf("Area=%f, Volume=%f\n",a,v);
23              }
24              break;
25              case 2:
26              {
27                  printf("Enter radius and height\n");
28                  scanf("%f%f",&r,&h);
29                  a=(3.14*r)*(r+sqrt((h*h)+(r*r)));
30                  v=(3.14*r*r*h)/3;
31                  printf("Area=%f, Volume=%f\n",a,v);
32              }
33              break;
34              case 3:
35              {
36                  printf("Enter radius\n");
37                  scanf("%f",&r);
38                  a=4*3.14*r*r;
39                  v=(3.14*4*r*r*r)/3;
40                  printf("Area=%f, Volume=%f\n",a,v);
41              }
42              break;
43              default:
44              {
45              printf("Enter a valid number\n");
46              }
47          }
48      }
49      return 0;
50  }
51
```

```
1-Cylinder
2-Cone
3-Sphere
0-Stop
1
Enter radius and height
2.3
4
Area=90.997200, Volume=66.442398
Enter the number
1-Cylinder
2-Cone
3-Sphere
0-Stop
3
Enter radius
3.8
Area=181.366394, Volume=229.730759
Enter the number
1-Cylinder
2-Cone
3-Sphere
0-Stop
0


------------------
(program exited with code: 0)

Press any key to continue . . .
```

```c
#include <stdio.h>
int main()
{
    int n,i, e1=0, e2=0, e3=0, x, p,min,l=0;
    struct student
    {
        int elec;
        char name[20];
    }ar[100];
    printf("Enter the number of the students\n");
    scanf("%d",&n);
    printf("Choice of elective:\n1-IoT,2-Advanced Java and J2EE,3-Advanced data structures\n");
    for(i=0;i<n;i++)
    {
        printf("Enter % d student's name and the choice of elective\n",i+1);
        scanf("%s%d",ar[i].name,&ar[i].elec);
        if(ar[i].elec==1)
        e1++;
        if(ar[i].elec==2)
        e2++;
        if(ar[i].elec==3)
        e3++;
    }
    if(e1<=e2&&e1<=e3)
    min=e1;
    if(e2<=e1&&e2<=e3)
    min=e2;
    if(e3<=e2&&e3<=e1)
    min=e3;
    printf("Enter the course number\n");
    scanf("%d",&x);
    printf("Names of the students who have opted for %d:\n",x);
    for(i=0;i<n;i++)
    {
        if(ar[i].elec==x)
        printf("%s\n",ar[i].name);
```

```
35          if(ar[i].elec==x)
36          printf("%s\n",ar[i].name);
37      }
38      printf("Total number of students in 1st course is %d\n",e1);
39      printf("Total number of students in 2nd course is %d\n",e2);
40      printf("Total number of students in 3rd course is %d\n",e3);
41      if(e1<3&&e2>=3&&e3>=3)
42      {
43          printf("Course 1 will not be floated. Plaese select from the other 2 courses\n");
44          p=1;
45          l=1;
46      }
47      if(e2<3&&e1>=3&&e3>=3)
48      {
49          printf("Course 2 will not be floated. Plaese select from the other 2 courses\n");
50          p=2;
51          l=1;
52      }
53      if(e3<3&&e1>=3&&e2>=3)
54      {
55          printf("Course 3 will not be floated. Plaese select from the other 2 courses\n");
56          p=3;
57          l=1;
58      }
59      if(l==0)
60      {
61          if(min==e1)
62          {
63              printf("Please select from course 2 and 3\n");
64              p=1;
65          }
66          else if(min==e2)
67          {
68              printf("Please select from course 1 and 3\n");
69              p=2;
70          }
```

```
68              printf("Please select from course 1 and 3\n");
69              p=2;
70          }
71          else if(min==e3)
72          {
73              printf("Please select from course 1 and 2\n");
74              p=3;
75          }
76      }
77      if(p==1)
78      {
79          for(i=0;i<n;i++)
80          {
81              if(ar[i].elec==1)
82              {
83                  printf("Enter a different course. Name:%s\n",ar[i].name);
84                  scanf("%d",&ar[i].elec);
85              }}}
86       else if(p==2)
87       {
88          for(i=0;i<n;i++)
89          {
90              if(ar[i].elec==2)
91              {
92                  printf("Enter a different course. Name:%s\n",ar[i].name);
93                  scanf("%d",&ar[i].elec);
94              }}}
95       else if(p==3)
96       {
97          for(i=0;i<n;i++)
98          {
99              if(ar[i].elec==3)
100             {
101                 printf("Enter a different course. Name:%s\n",ar[i].name);
102                 scanf("%d",&ar[i].elec);
103             }}}
```

```
            {
                printf("Enter a different course. Name:%s\n",ar[i].name);
                scanf("%d",&ar[i].elec);
            }}}
    else if(p==3)
    {
       for(i=0;i<n;i++)
       {
            if(ar[i].elec==3)
            {
                printf("Enter a different course. Name:%s\n",ar[i].name);
                scanf("%d",&ar[i].elec);
            }}}
    printf("Students in 1 elective\n");
    for(i=0;i<n;i++)
    {
        if(ar[i].elec==1)
        printf("%s\n",ar[i].name);
    }
    printf("Students in 2 elective\n");
    for(i=0;i<n;i++)
    {
        if(ar[i].elec==2)
        printf("%s\n",ar[i].name);
    }
    printf("Students in 3 elective\n");
    for(i=0;i<n;i++)
    {
        if(ar[i].elec==3)
        printf("%s\n",ar[i].name);
    }
    return 0;
}
```

```
Enter the number of the students
8
Choice of elective:
1-IoT,2-Advanced Java and J2EE,3-Advanced data structures
Enter  1 student's name and the choice of elective
qqq
1
Enter  2 student's name and the choice of elective
www
1
Enter  3 student's name and the choice of elective
eee
1
Enter  4 student's name and the choice of elective
rrr
2
Enter  5 student's name and the choice of elective
aaa
2
Enter  6 student's name and the choice of elective
sss
2
Enter  7 student's name and the choice of elective
fff
3
Enter  8 student's name and the choice of elective
ttt
3
Enter the course number
2
Names of the students who have opted for 2:
rrr
aaa
sss
Total number of students in 1st course is 3
Total number of students in 2nd course is 3
Total number of students in 3rd course is 2
Course 3 will not be floated. Plaese select from the other 2 courses
Enter a different course. Name:fff
1
Enter a different course. Name:ttt
2
Students in 1 elective
qqq
www
eee
fff
Students in 2 elective
rrr
aaa
```

```
Students in 1 elective
qqq
www
eee
fff
Students in 2 elective
rrr
aaa
sss
ttt
Students in 3 elective


------------------
(program exited with code: 0)

Press any key to continue . . .
```