CLASS WORK PROGRAMMS-2

1. Write a program to enter the marks of a student in four subjects. Then calculate the total and aggregate, display the grade obtained by the student. If the student scores an aggregate greater than 75%, then the grade is Distinction. If aggregate is 60>= and <75, then the grade is First Division. If aggregate is 50 >= and <60, then the grade is Second Division. If aggregate is 40>= and <50, then the grade is Third Division. Else the grade is Fail.

Sample Input & Output:

Enter the marks in python: 90

Enter the marks in c programming: 91

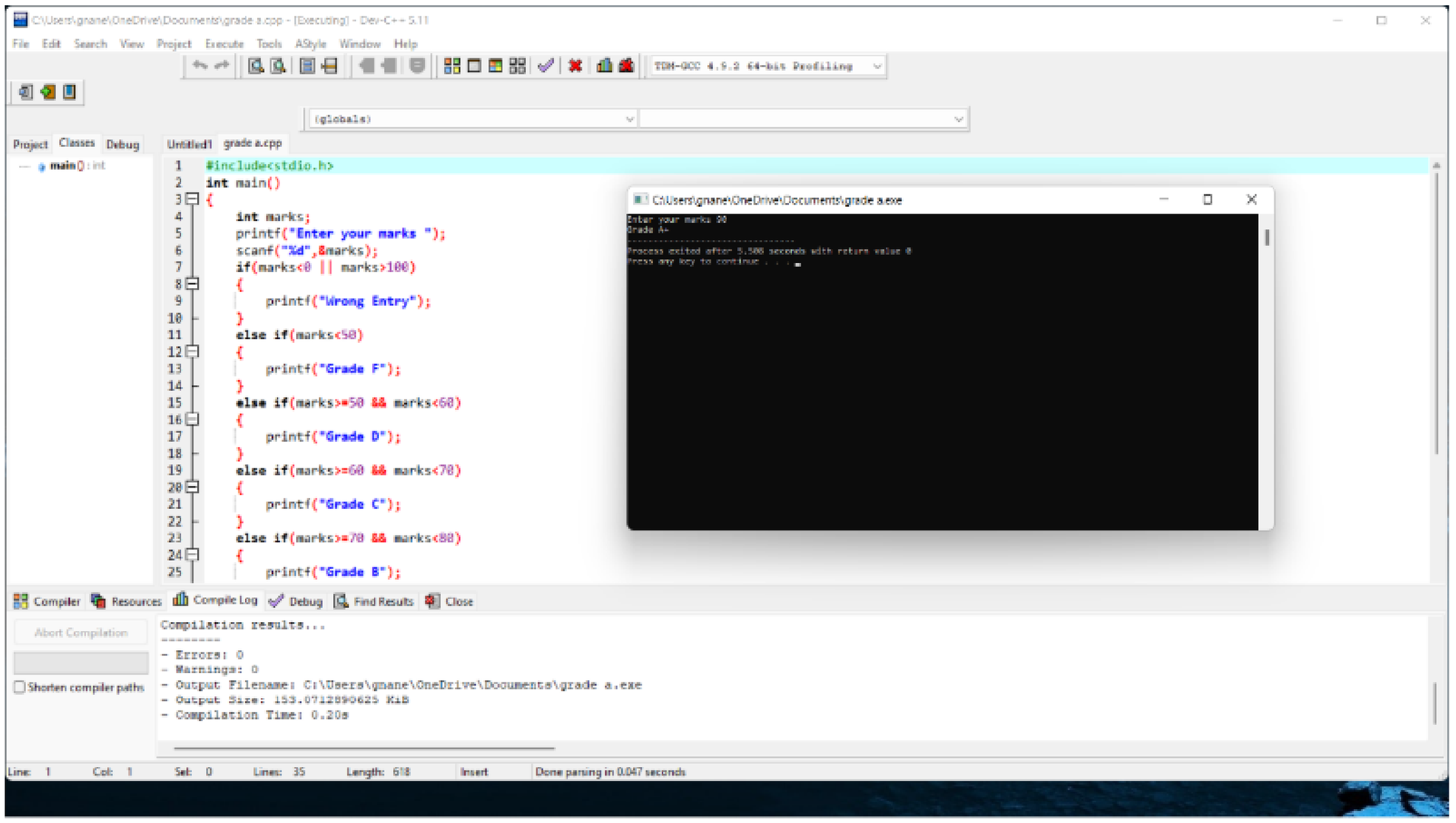
Enter the marks in Mathematics: 92

Enter the marks in Physics: 93

Total= 366

Aggregate = 91.5

DISTINCTION



2.Mr. Johnson would like to know how many As, Bs, Cs, Ds, and Fs his students received on a test. He has n students who took the test. He would like to enter the student number and the number grade for the test for each student using structure. Develop the solution to print out each student' s student number, number grade and the total number of As, Bs, Cs, Ds, and Fs.

His grading scale is as follows: 90– 100 is an A, 78– 89 is a B, 65– 77 is a C, 50– 64 is a D, and below 50 is an F.

Sample Input :

Enter No.Students: 1

Enter student 1 Number , Grade : 2001, A

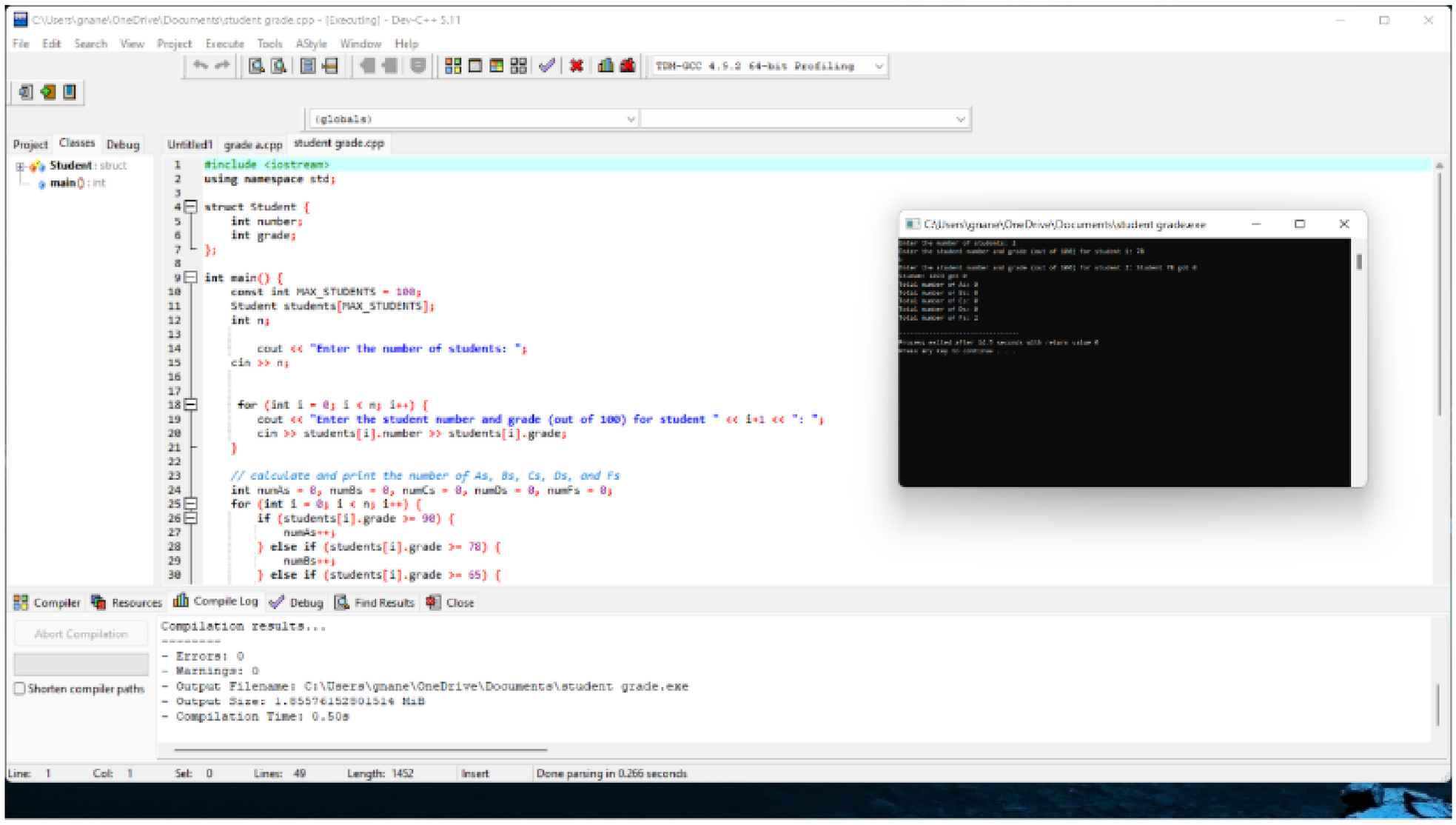
Sample Output:

Student 1 details:

Number : 2001

Grade : A

Total no. A: 1, B:0, c=0, D=0, F=0,



3. Write a program to print n prime numbers then find the n^{th} Prime number

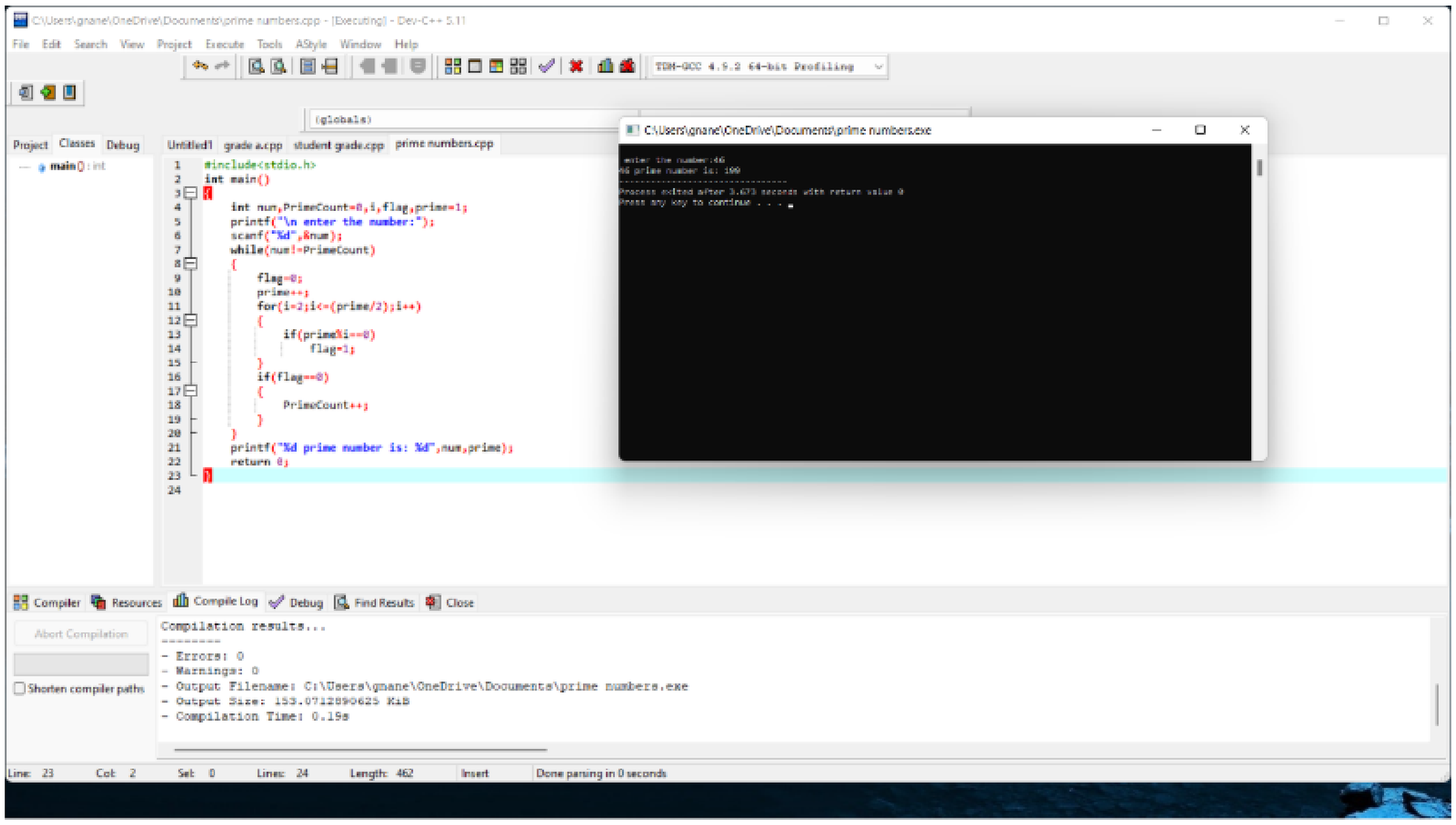
Sample Input:

N = 3

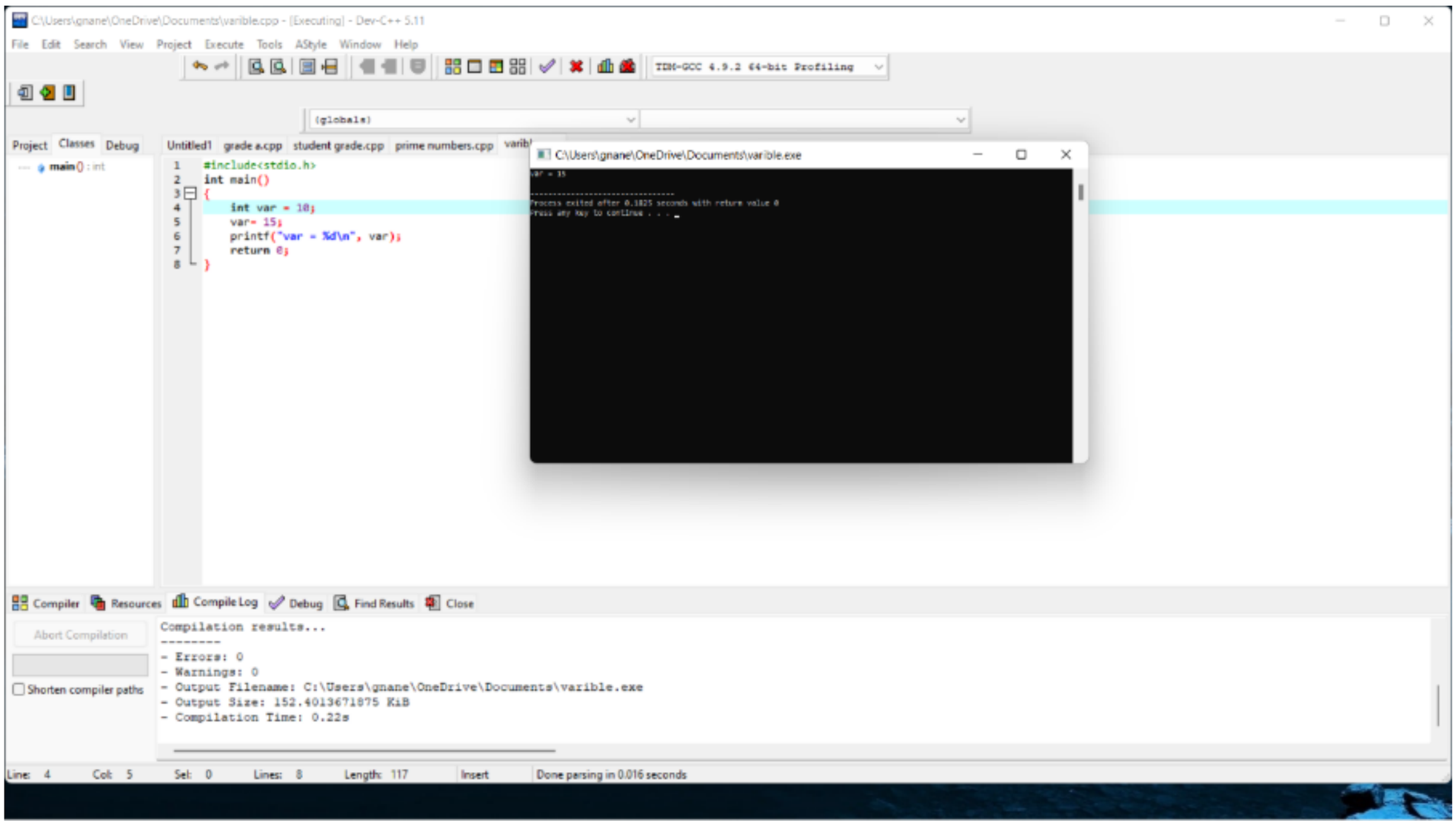
Sample Output:

3rd Prime number is 5

3 prime numbers after 5 are: 7, 11, 13

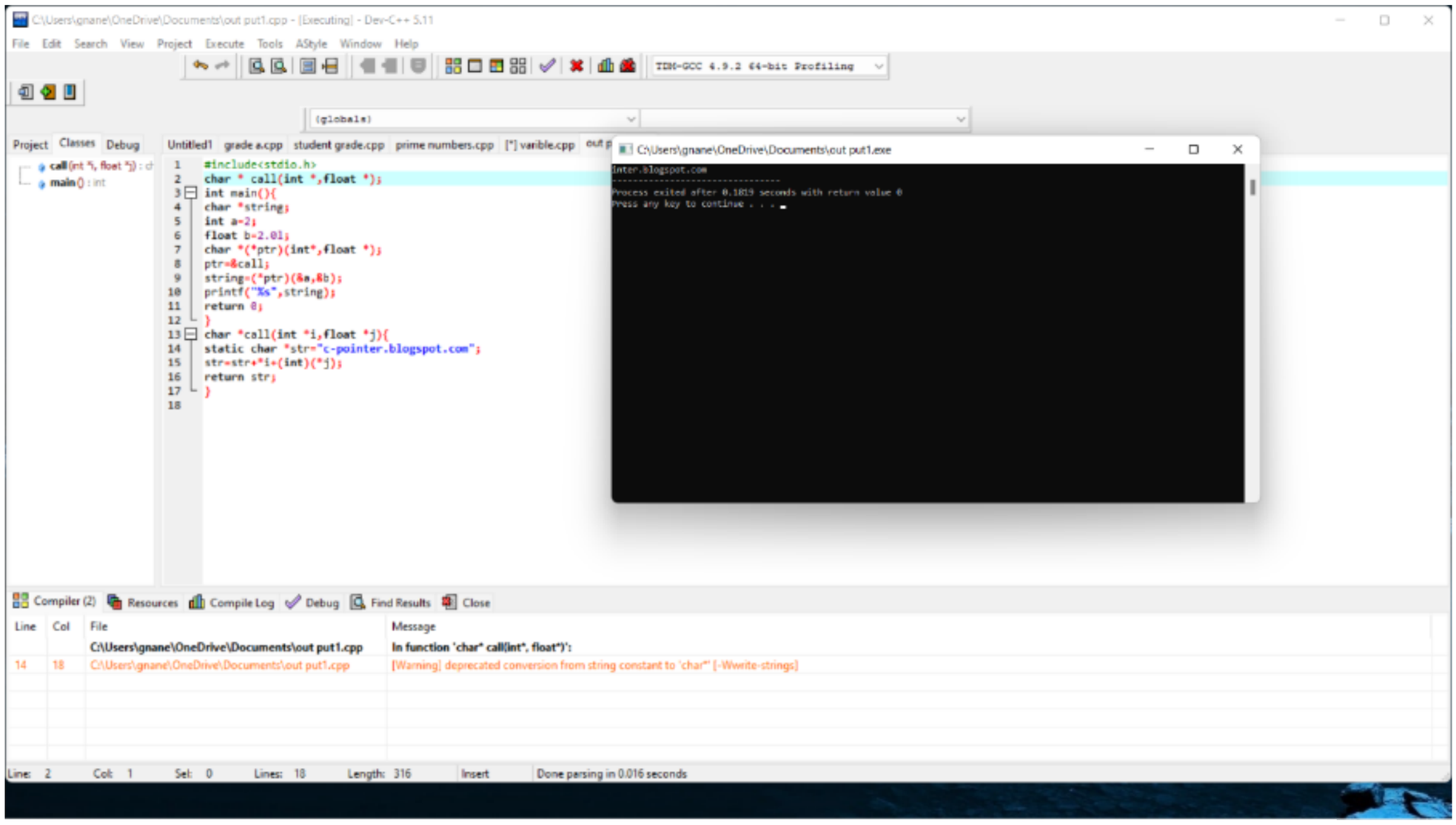


4. Write a c program to modify the constant variable in c.?



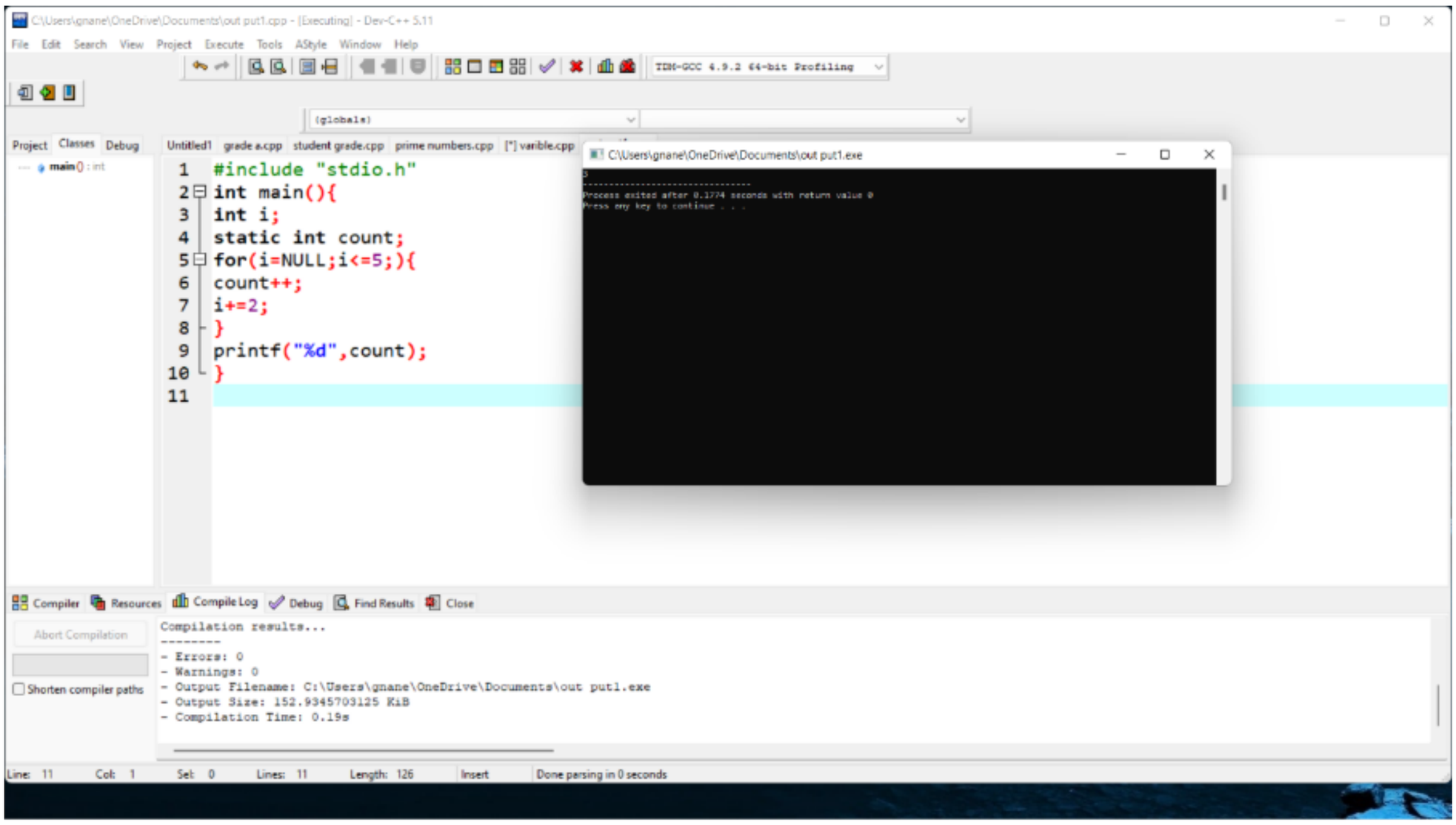
5. What will be output if you will execute following code?

```
char * call(int *,float *);
int main(){
char *string;
int a=2;
float b=2.0l;
char *(*ptr)(int*,float *);
ptr=&call;
string=(*ptr)(&a,&b);
printf("%s",string);
return 0;
}
char *call(int *i,float *j){
static char *str="c-pointer.blogspot.com";
str=str+*i+(int)(*j);
return str;
}
```

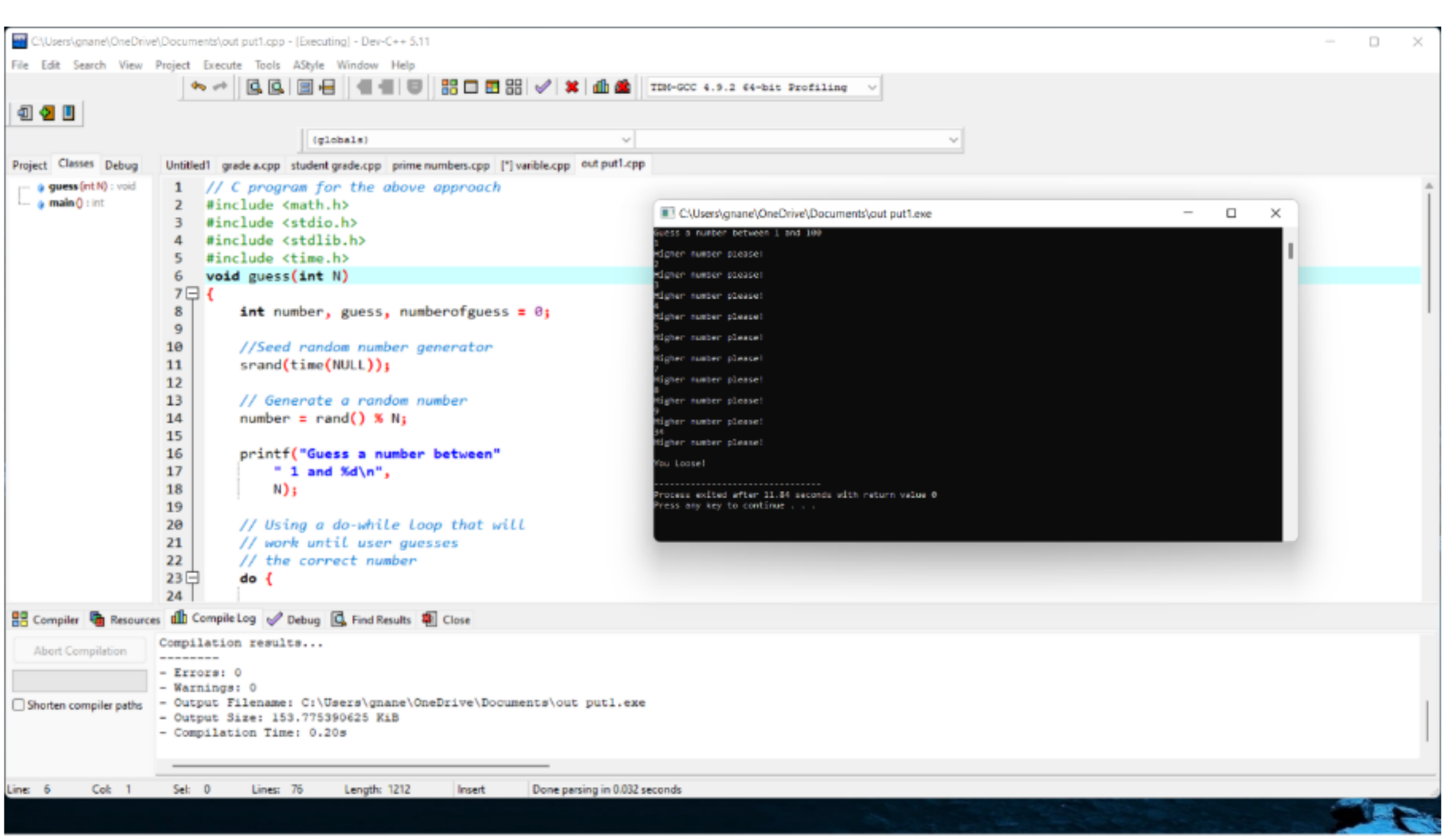


6. What will be the output of following c program?

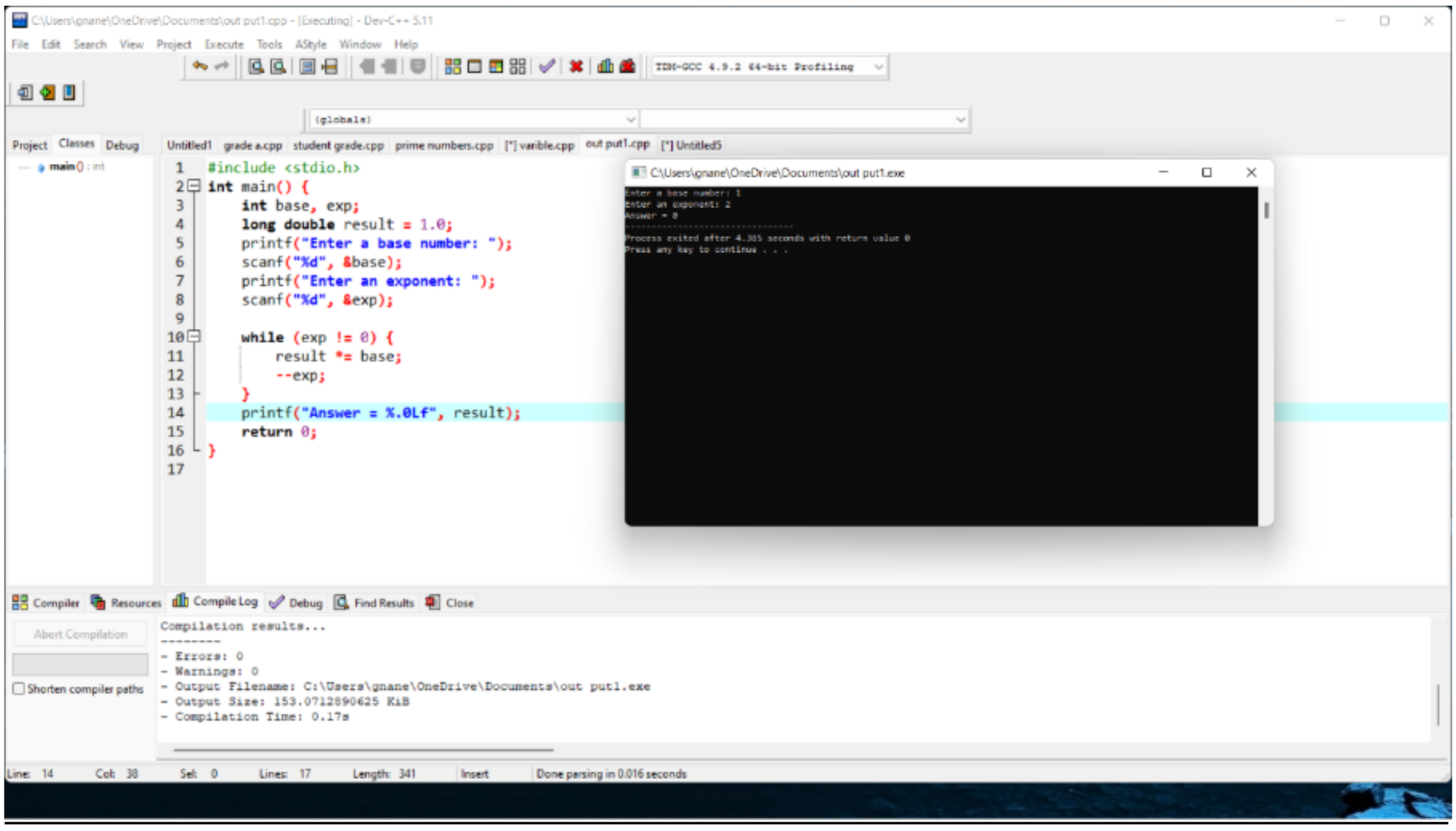
```
#include "stdio.h"
int main(){
        int i;
        static int count;
        for(i=NULL;i<=5;){
        count++;
        i+=2;
        }
        printf("%d",count);
}
```



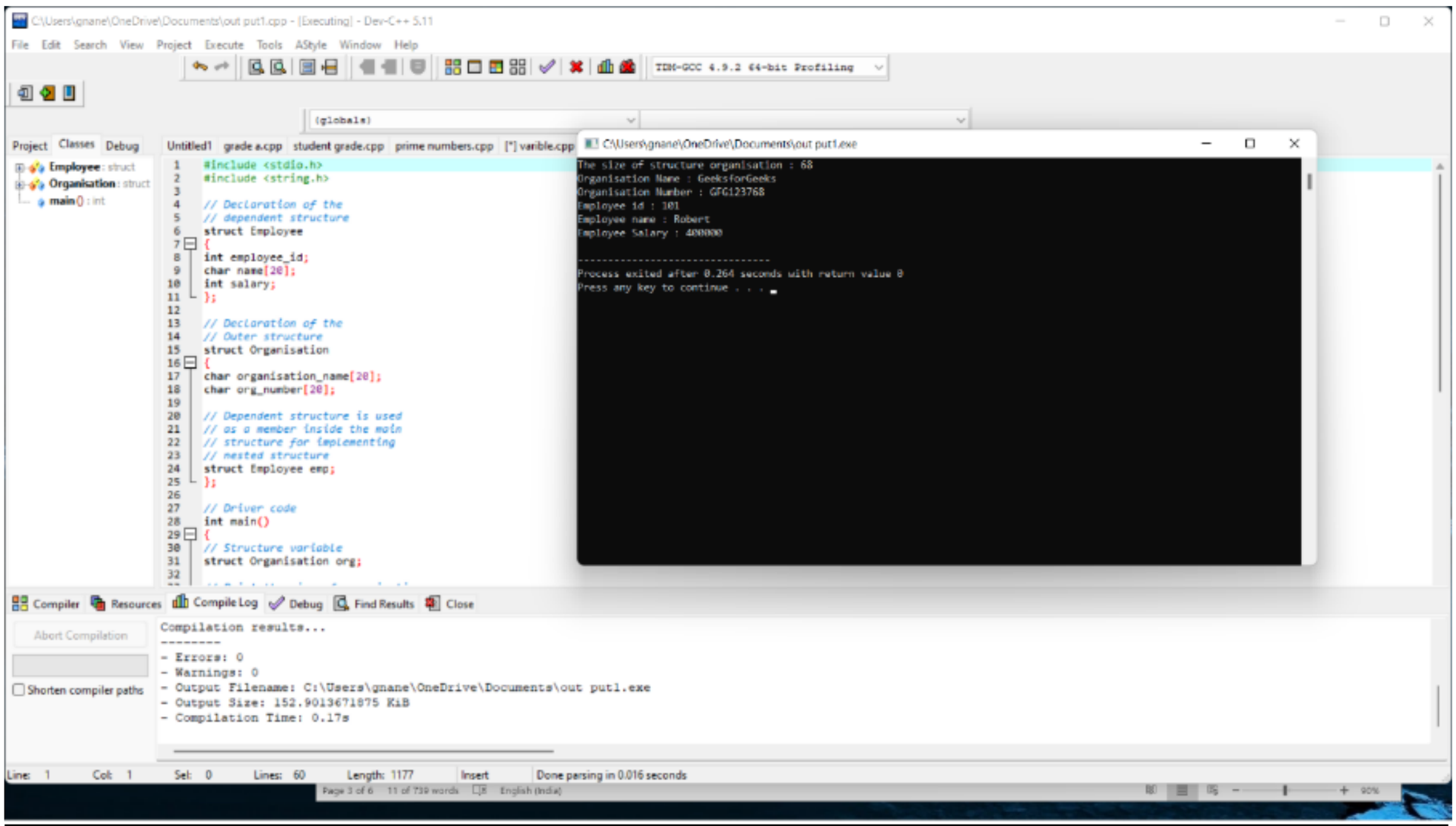
7.Write a program to guessing a number by the user against computer generated one using do while loop



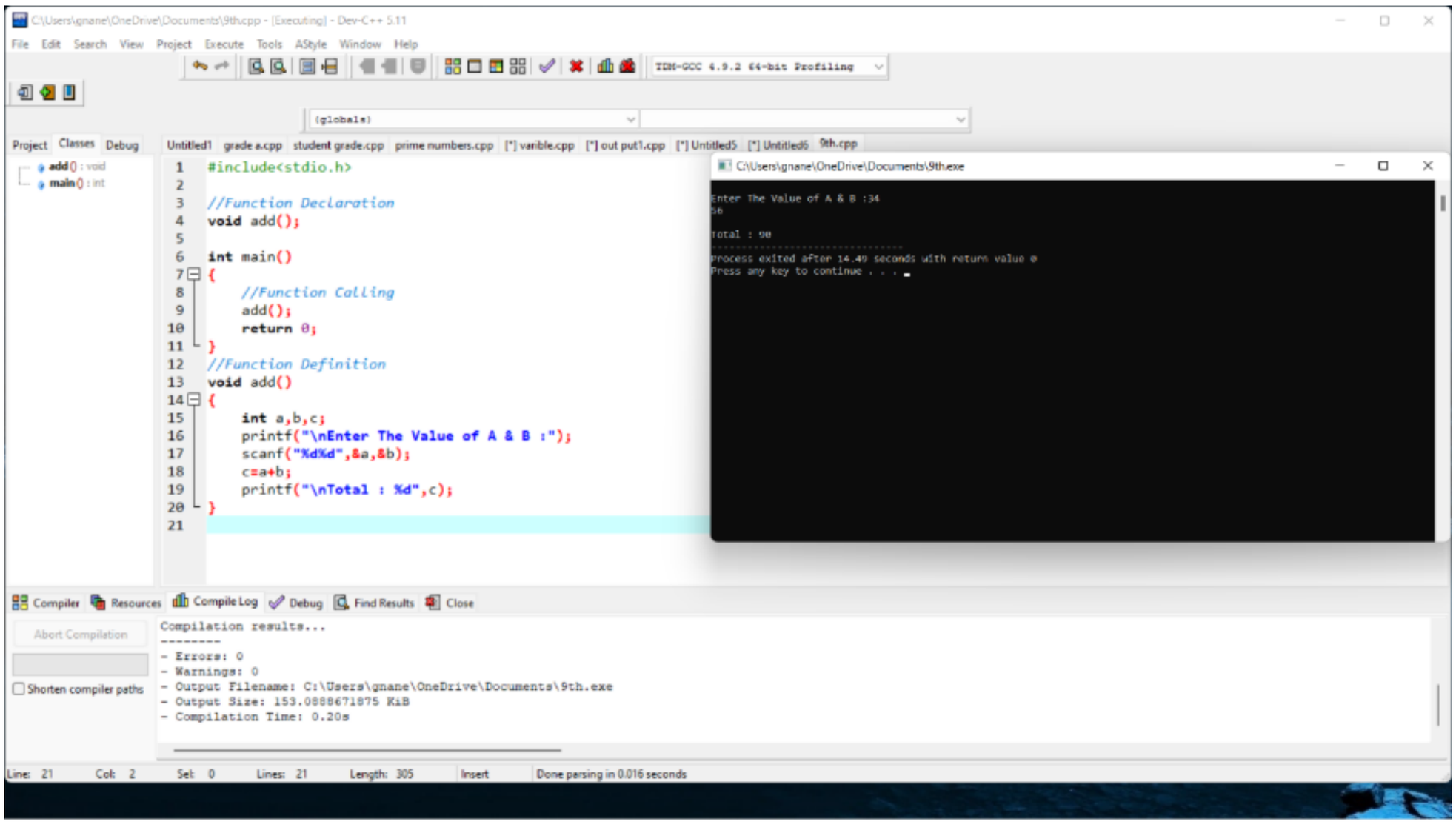
8.To write a C code to implement a function to compute power of a value



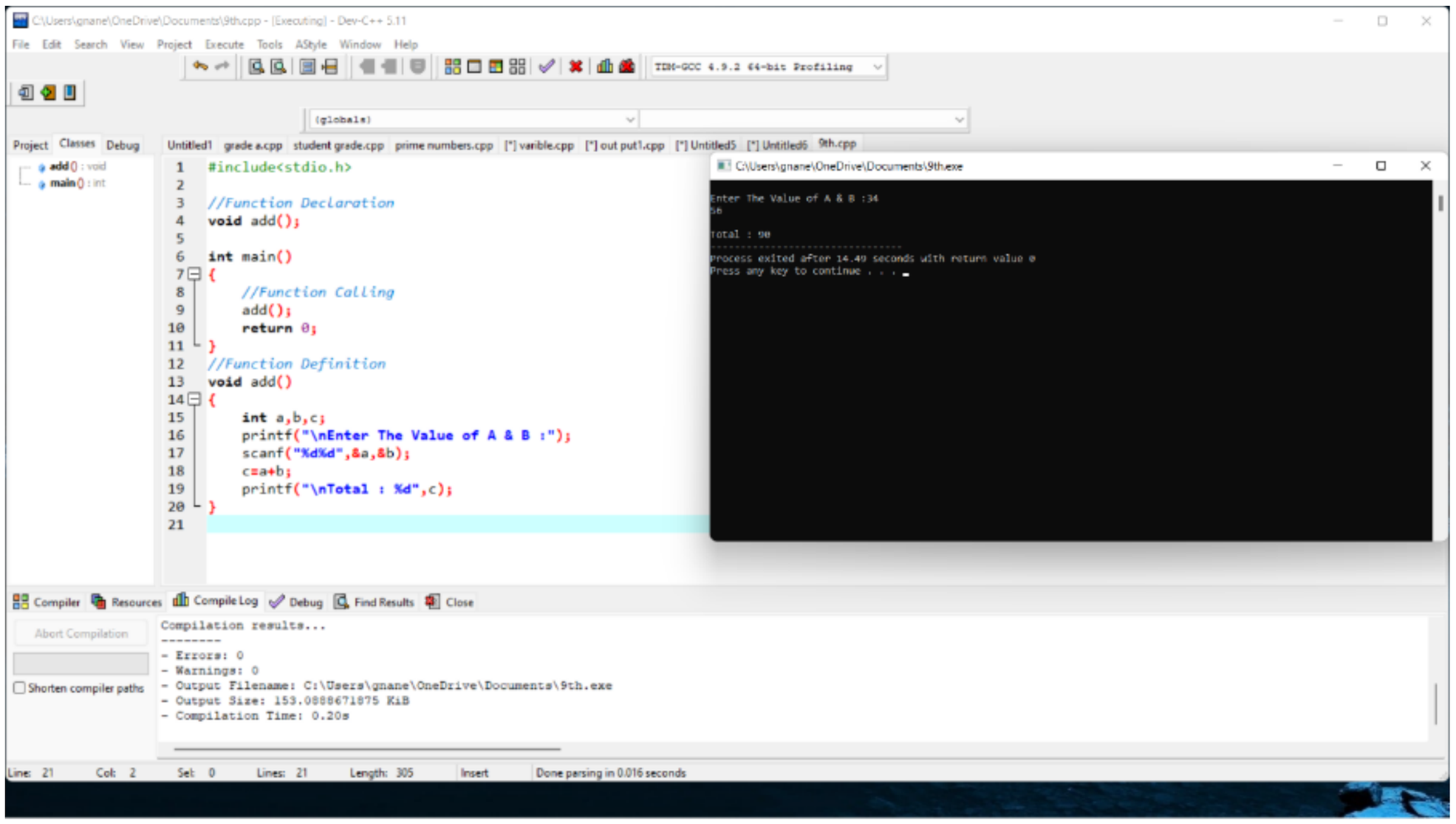
9.To write a C code to implement Nested Structure concept



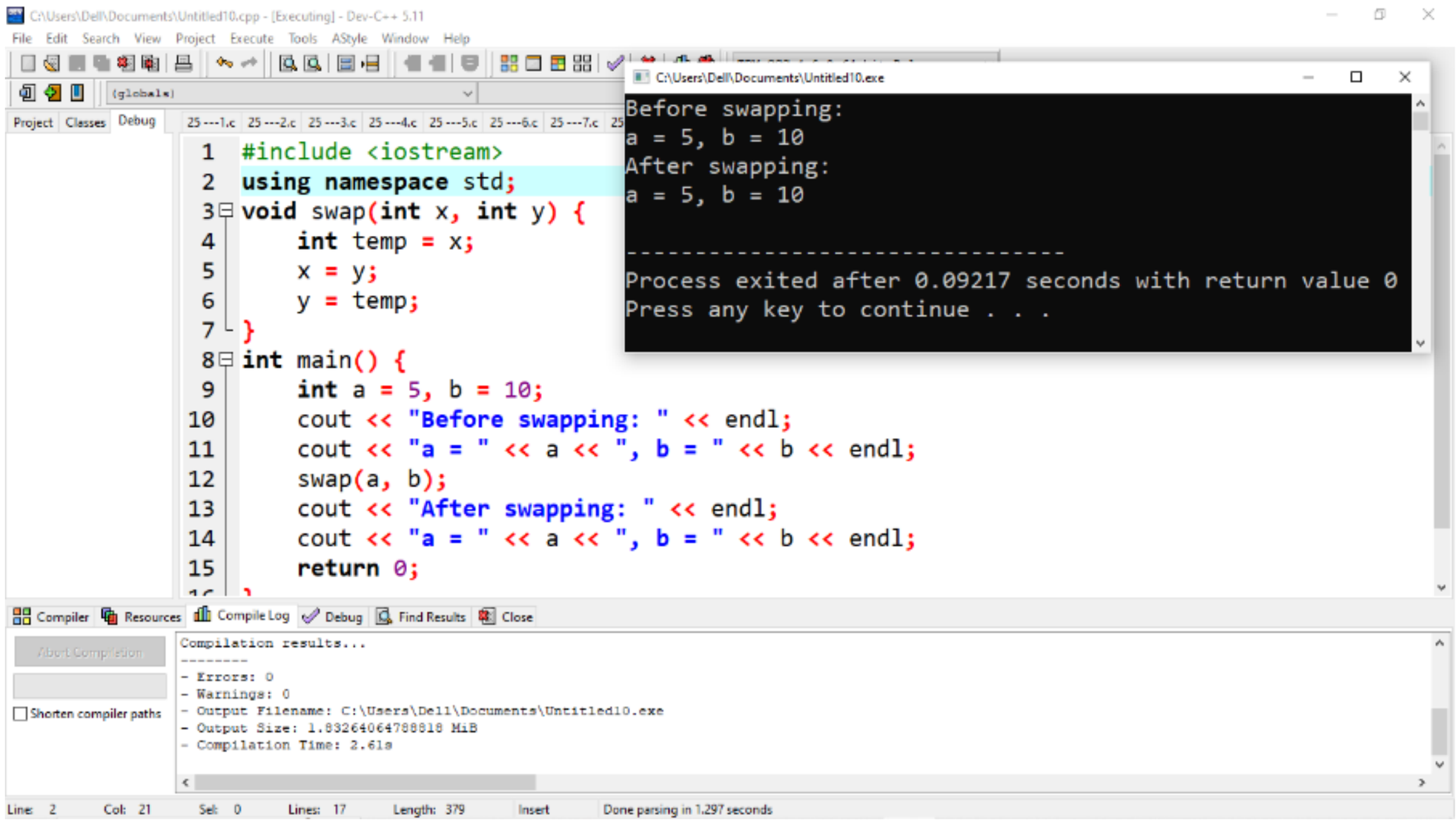
10.Program to add two numbers using Function with no arguments and no return value



11.Program to add two numbers using Function with arguments and with return value

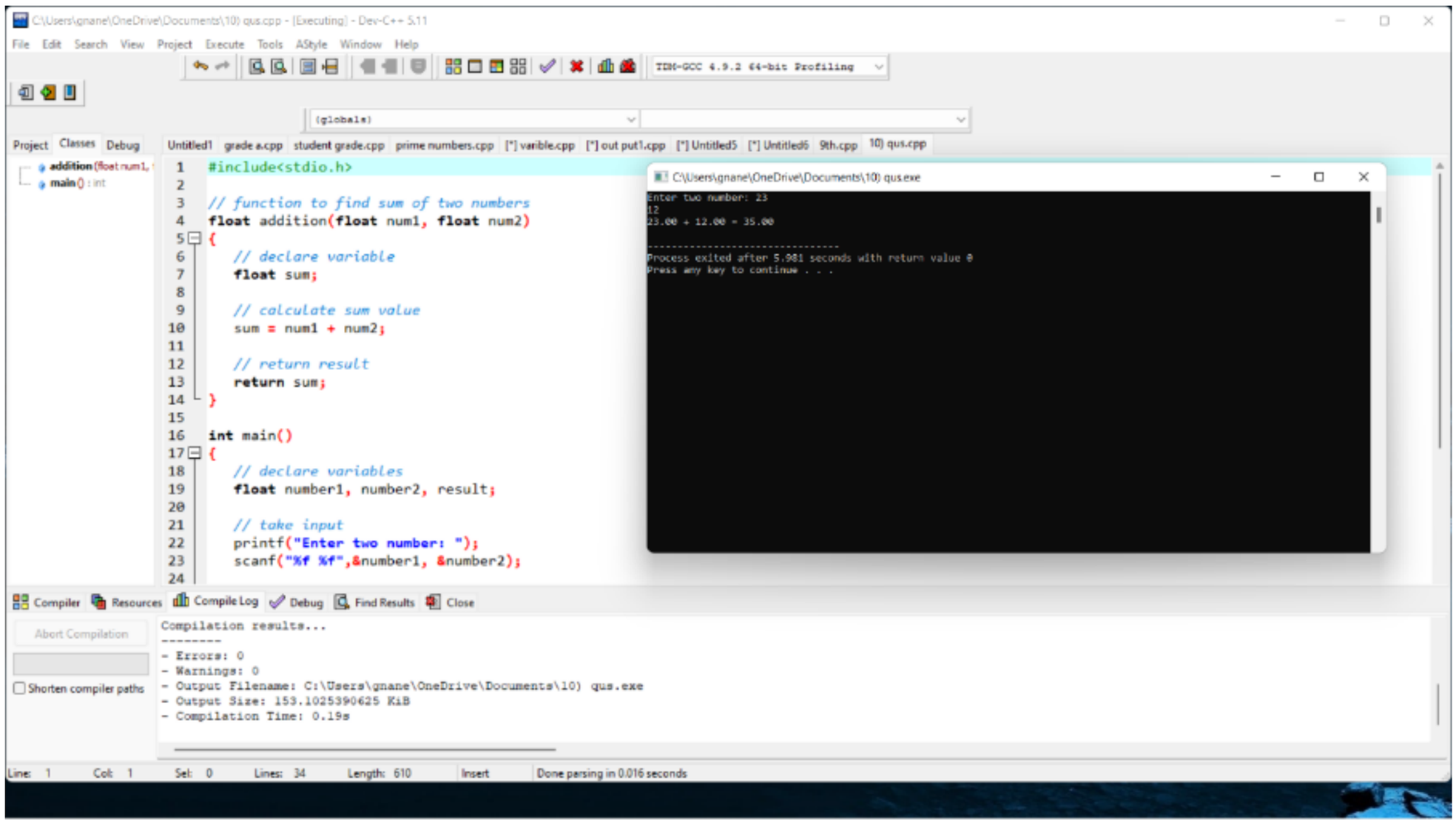


12.Program to swap two numbers using call by value

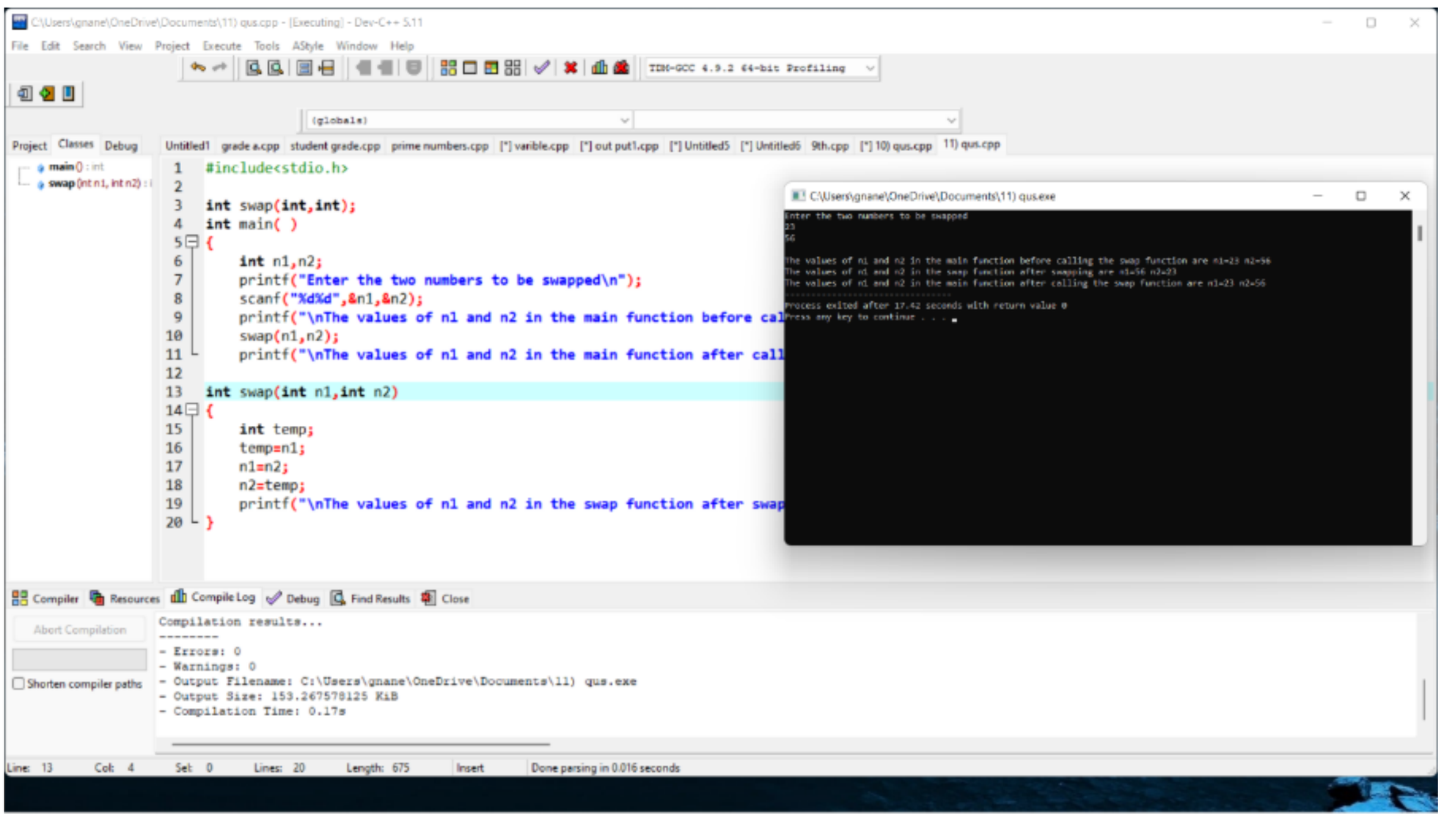


13.Find out the error and show the output

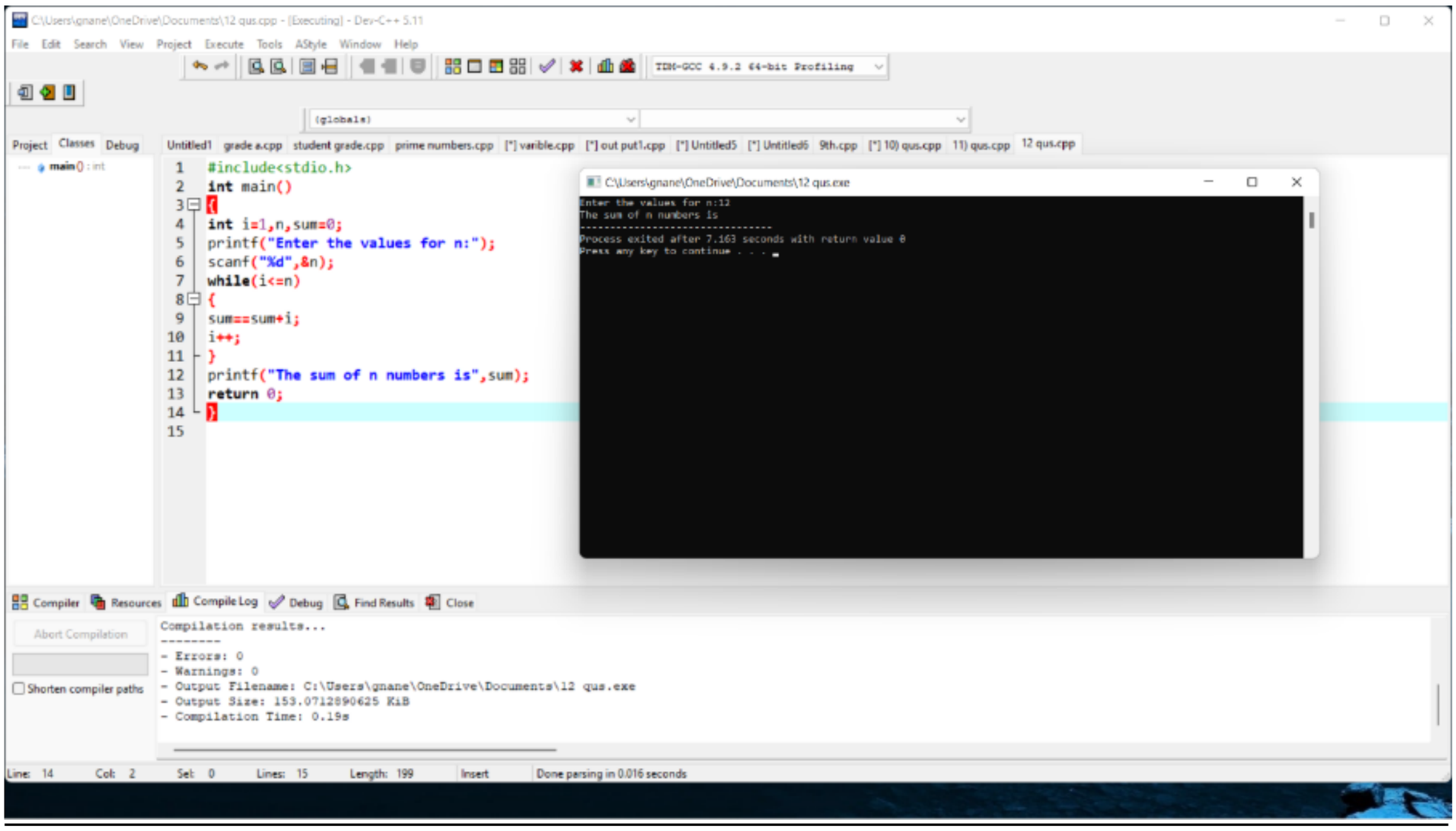
```
 main()
{
 int i=1,sum=0;
 clrscr();
printf(“  Enter the values for n:”  );
scanf(“  %d”  ,n);
while(i<=n)
{
sum==sum+i;
i++;
}
printf(“  The sum of n numbers is”  ,sum);
}
```



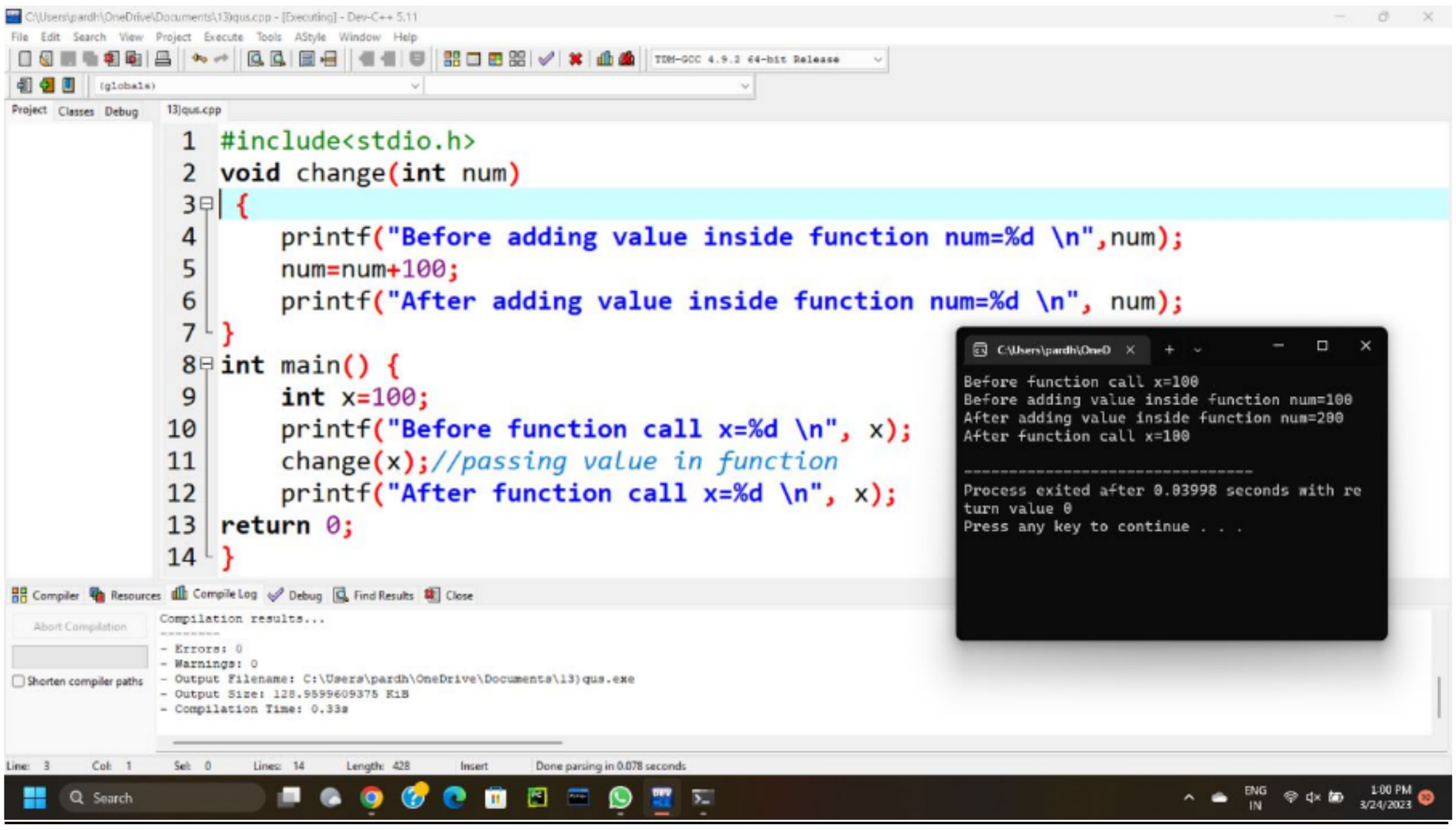
14.Program to swap two numbers using call by reference



15.Write a program for Binary Search using recursive functions



16.Program to find Employee no, name, salary, doj using nested structure



17.Program to find student details using nested structure

```
#include <stdio.h>
int iterativeBinarySearch(int array[], int start_index, int end_index, i
   while (start_index <= end_index){
      int middle = start_index + (end_index- start_index )/2;
      if (array[middle] == element)
         return middle;
      if (array[middle] < element)
         start_index = middle + 1;
      else
         end_index = middle - 1;
   }
   return -1;
}
int main(void){
   int array[] = {1, 4, 7, 9, 16, 56, 70};
   int n = 7;
   int element = 16;
   int found_index = iterativeBinarySearch(array, 0, n-1, element);
   if(found_index == -1 ) {
      printf("Element not found in the array ");
   }
   else {
      printf("Element found at index : %d",found_index);
   }
   return 0;
```

```
Element found at index : 4
--------------------------------
Process exited after 0.0321 seconds with return value 0
Press any key to continue . . .
```

18.Program to store 3 book records in one structure / using array of structure

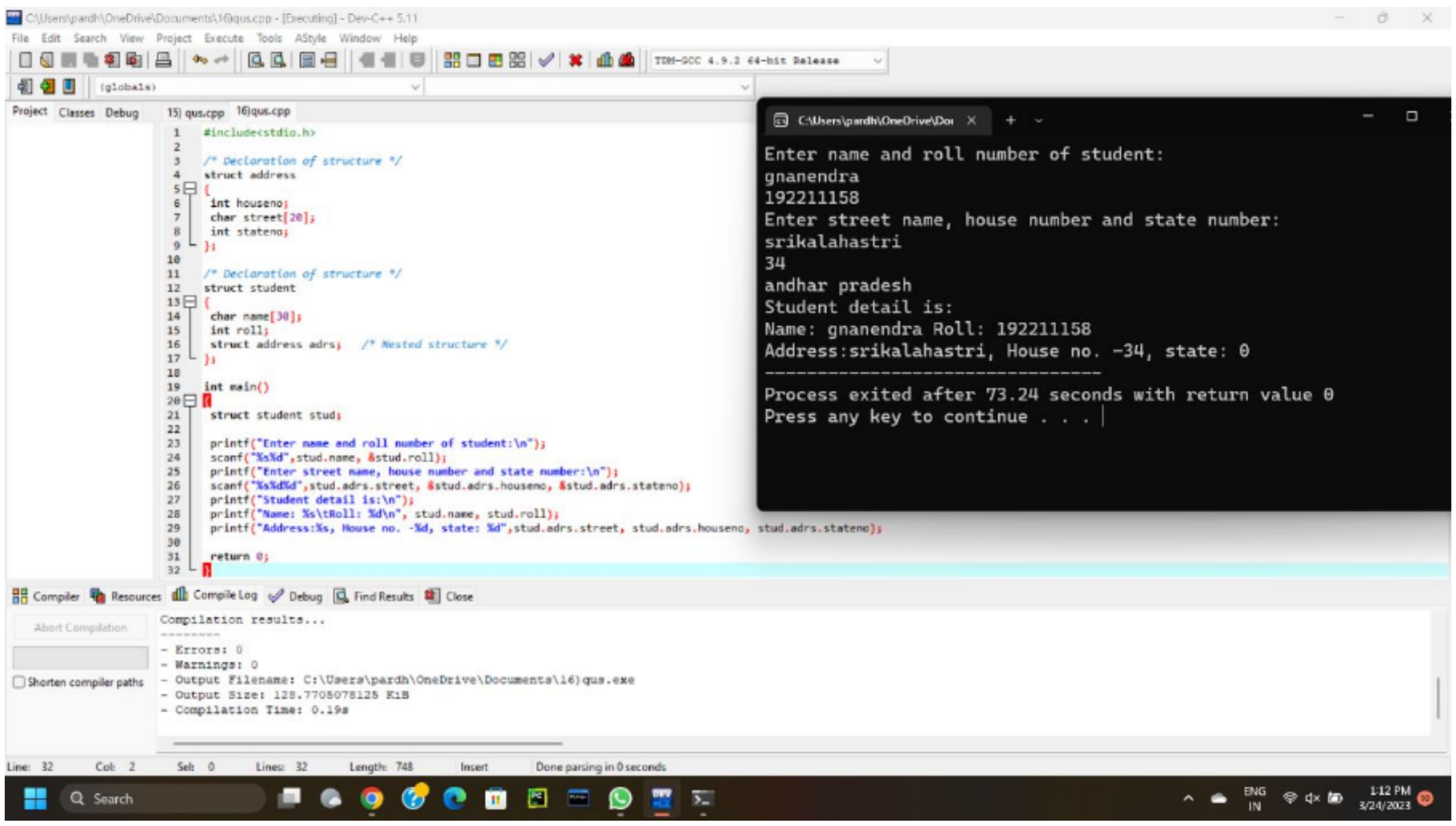
```
#include <stdio.h>

/*structure declaration*/
struct employee{
    char    name[30];
    int     empId;
    float   salary;
};

int main()
{
    /*declare structure variable*/
    struct employee emp;

    /*read employee details*/
    printf("\nEnter details :\n");
    printf("Name ?:");          gets(emp.name);
    printf("ID ?:");            scanf("%d",&emp.empId);
    printf("Salary ?:");        scanf("%f",&emp.salary);

    /*print employee details*/
    printf("\nEntered detail is:");
    printf("Name: %s"    ,emp.name);
    printf("Id: %d"      ,emp.empId);
    printf("Salary: %f\n",emp.salary);
```

```
Enter details :
Name ?:gnanendra
ID ?:192211158
Salary ?:10000000000

Entered detail is:Name: gnanendraId: 192211158Salary: 10000000000.
000000

--------------------------------
Process exited after 34.12 seconds with return value 0
Press any key to continue . . .
```

```
Compilation results...
---------
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\pardh\OneDrive\Documents\15) qus.exe
- Output Size: 129.439453125 KiB
- Compilation Time: 0.20s
```

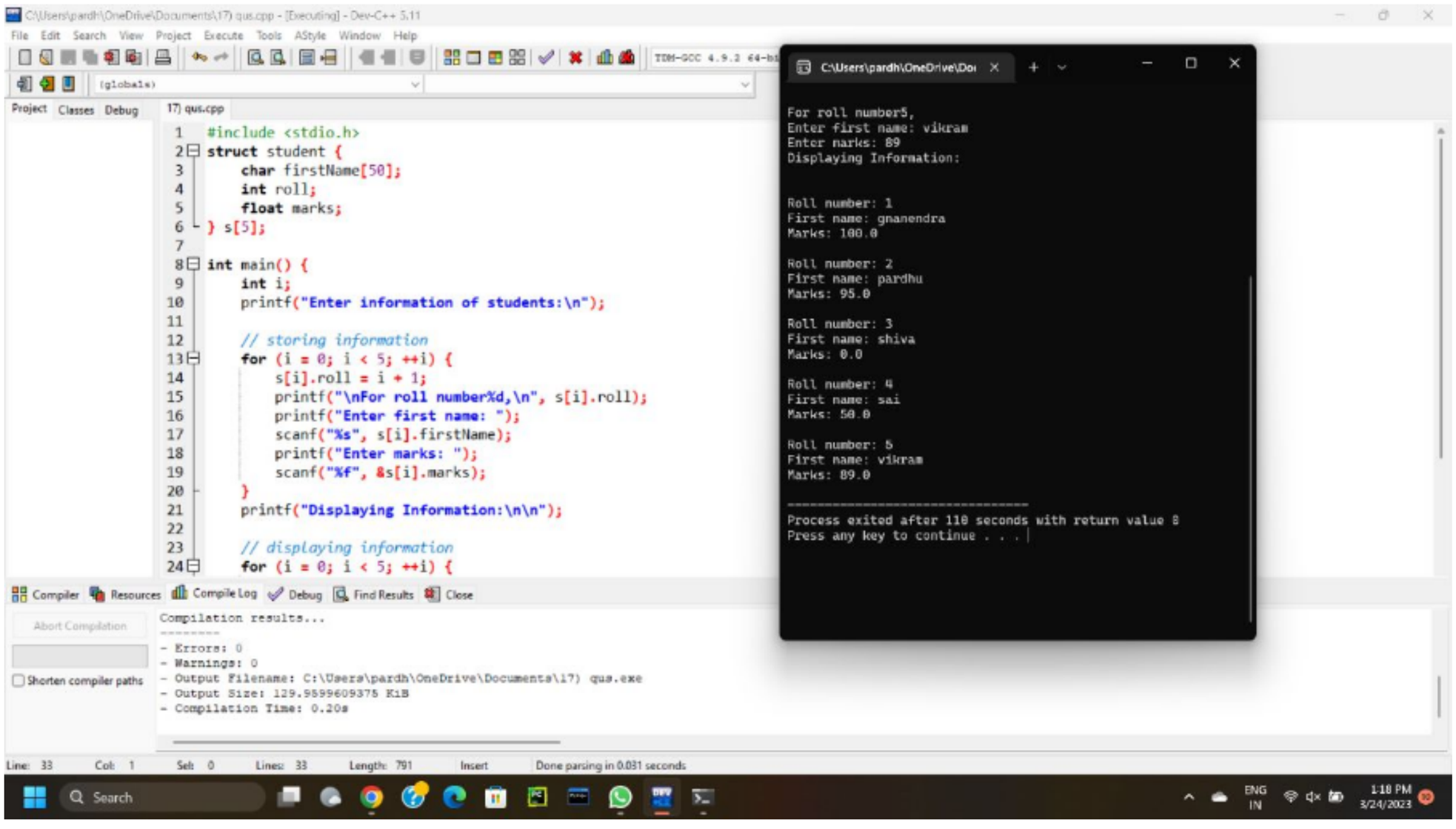
19. Find out the error and show the output

```
void main()
{
        intarr[3][4];
        inti,j,k;
        printf("Enter array element");
for(i=0;i<3;i++)
{
        for(j=0; j < 4; j++)
        {
                scanf("%d",arr[i][j]);
        }
}
for(i=1; i < 3; i++)
{
        for(j=0; j < 4; j++)
        {
                printf(“   %c”   ,arr[i][j]);
        }
        getch();
}
```



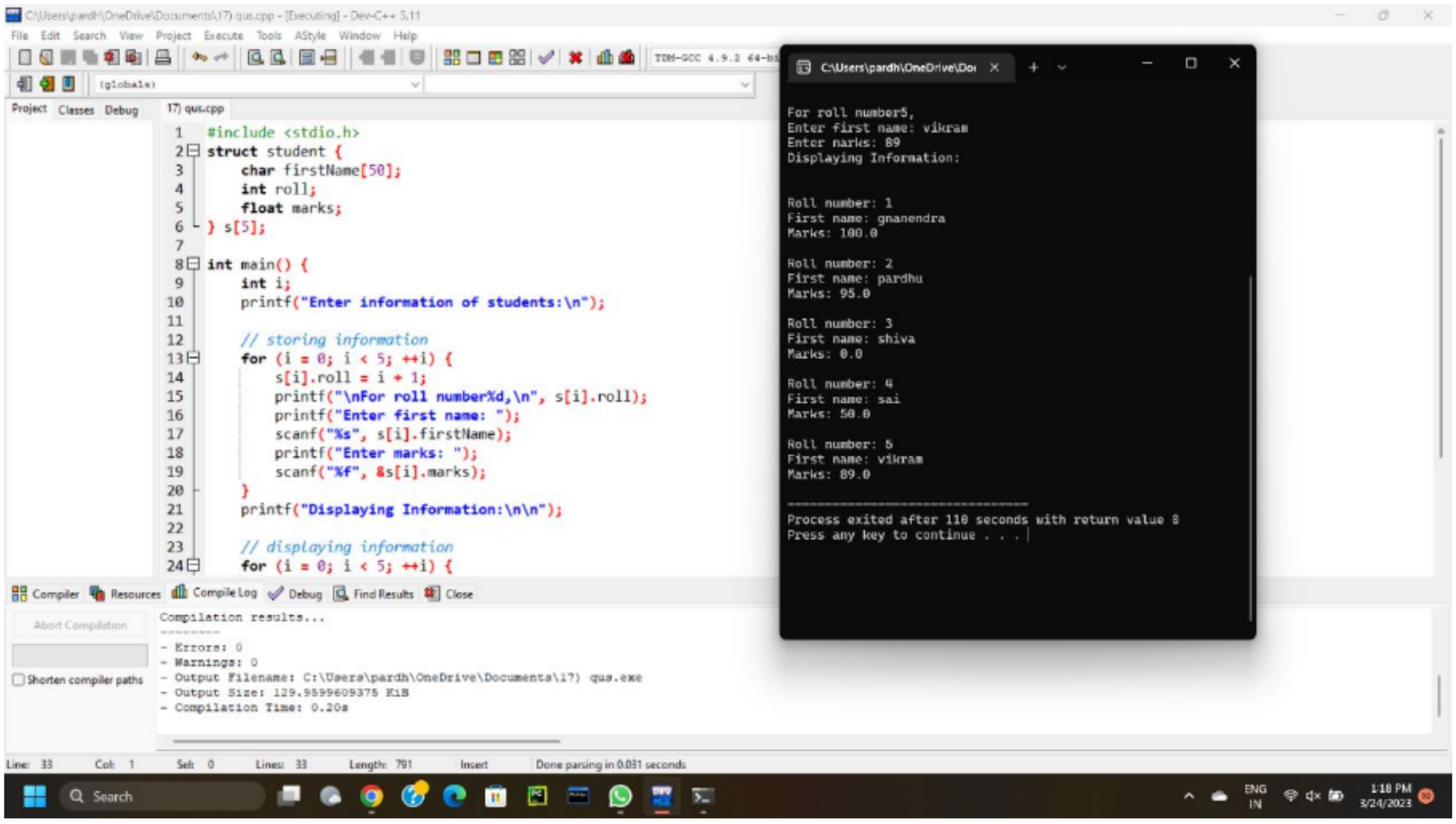
20.Find out the error and show the output

```
void main()
{
        int a[20][20],c[20][20],i,j,r1,c1;
        clrscr();
printf("\n Enter the number of rows and column of a matrix: \n");
scanf("%d",&r1,&c1);
printf("Enter the elements of matrix :");
for(i=0;i<r1;i++)
{
        for(j=0;j<r1;j++)
        scanf("%d",&a[i][j]);
}
printf("The elements of matrix are :");

for(i=0;i<r1;i++)
{
        Printf {“   \n”   );
        for(j=0;j<c1;j++)
        printf("\t%d",&a[i][j]);
}
printf("\n Transpose Matrix is\n");
for(i=0;i<r1;i++)
{
        printf("\n");
        for(j=0;j<c2;j++)
        {
                c[i][j]=a[j][i]; /* inverse rows and column */
                printf("%d\t",c[i][j]);
        }
}
        getch();
}
```



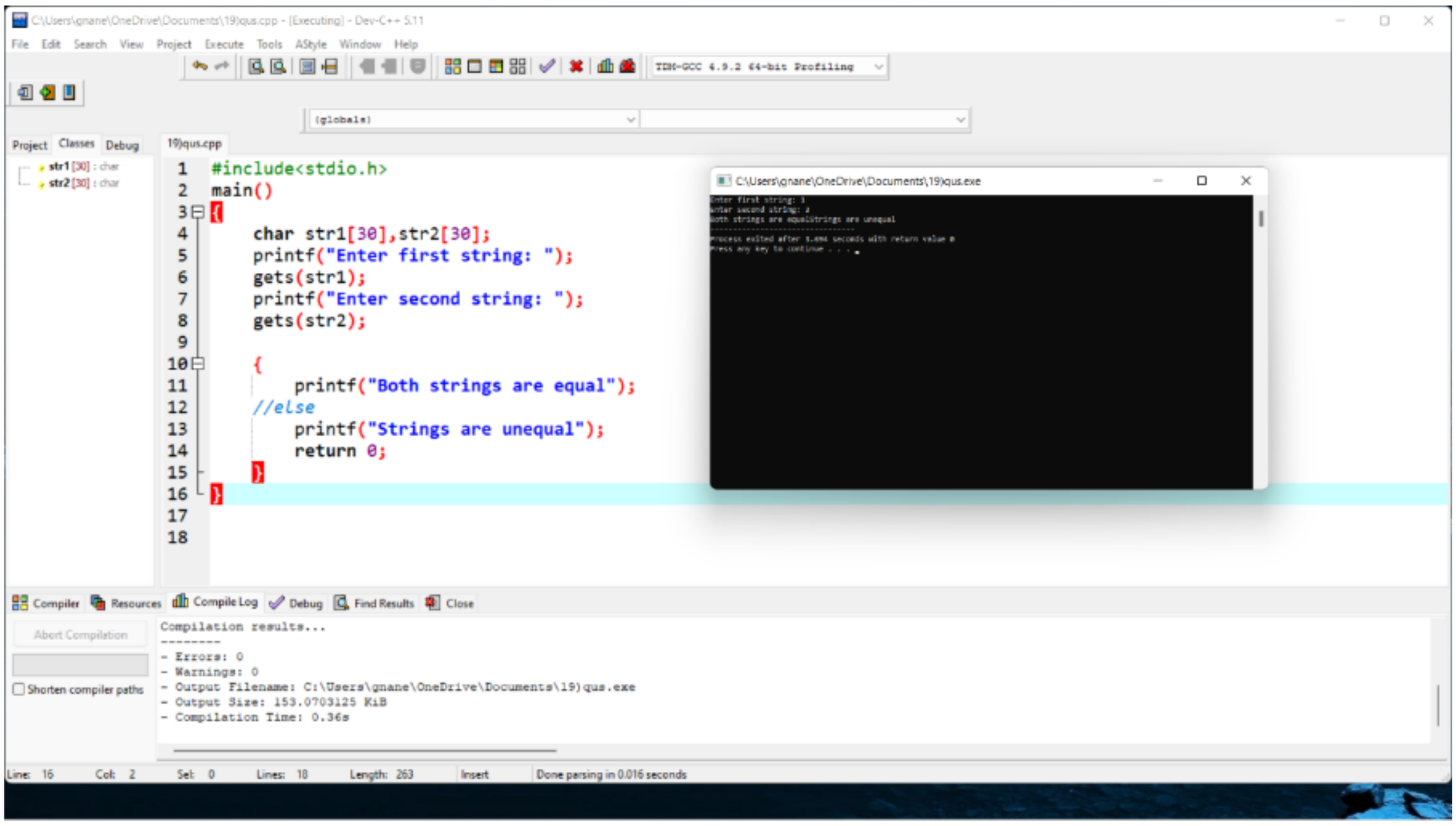
21.Find out the error and show the output

```
void main()
{
        charstr[50];
        inti,length = 0;
        clrscr();
        printf("\nEnter the String: ");
        get(str);
        for(i=0; str[i]!='\0'; i++)
        {
                length++;
        }
        printf("\nThe length of the string is %c.",count);
        getche();
}
```



22.Find out the error and show the output

```
void main()
{
        char str1[30],str2[30];
        printf("Enter first string: ");
        gets(str1);
        printf("Enter second string: ");
        get(str2);
        if(strcmp(str1,str2)=0)
        {
                print("Both strings are equal");
        else
                printf("Strings are unequal");
        }
}
```


C:\Users\gnane\OneDrive\Documents\19)qus.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Profiling
(globals)
Project Classes Debug
str1 [30] : char
str2 [30] : char
19)qus.cpp
#include<stdio.h>
main()
{
char str1[30],str2[30];
printf("Enter first string: ");
gets(str1);
printf("Enter second string: ");
gets(str2);
{
printf("Both strings are equal");
//else
printf("Strings are unequal");
return 0;
}
}
C:\Users\gnane\OneDrive\Documents\19)qus.exe
Enter first string: 1
Enter second string: 2
Both strings are equalStrings are unequal
Process exited after 5.005 seconds with return value 0
Press any key to continue . . .
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Shorten compiler paths
Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\gnane\OneDrive\Documents\19)qus.exe
- Output Size: 153.0703125 KiB
- Compilation Time: 0.36s
Line: 16 Col: 2 Sel: 0 Lines: 18 Length: 263 Insert Done parsing in 0.016 seconds