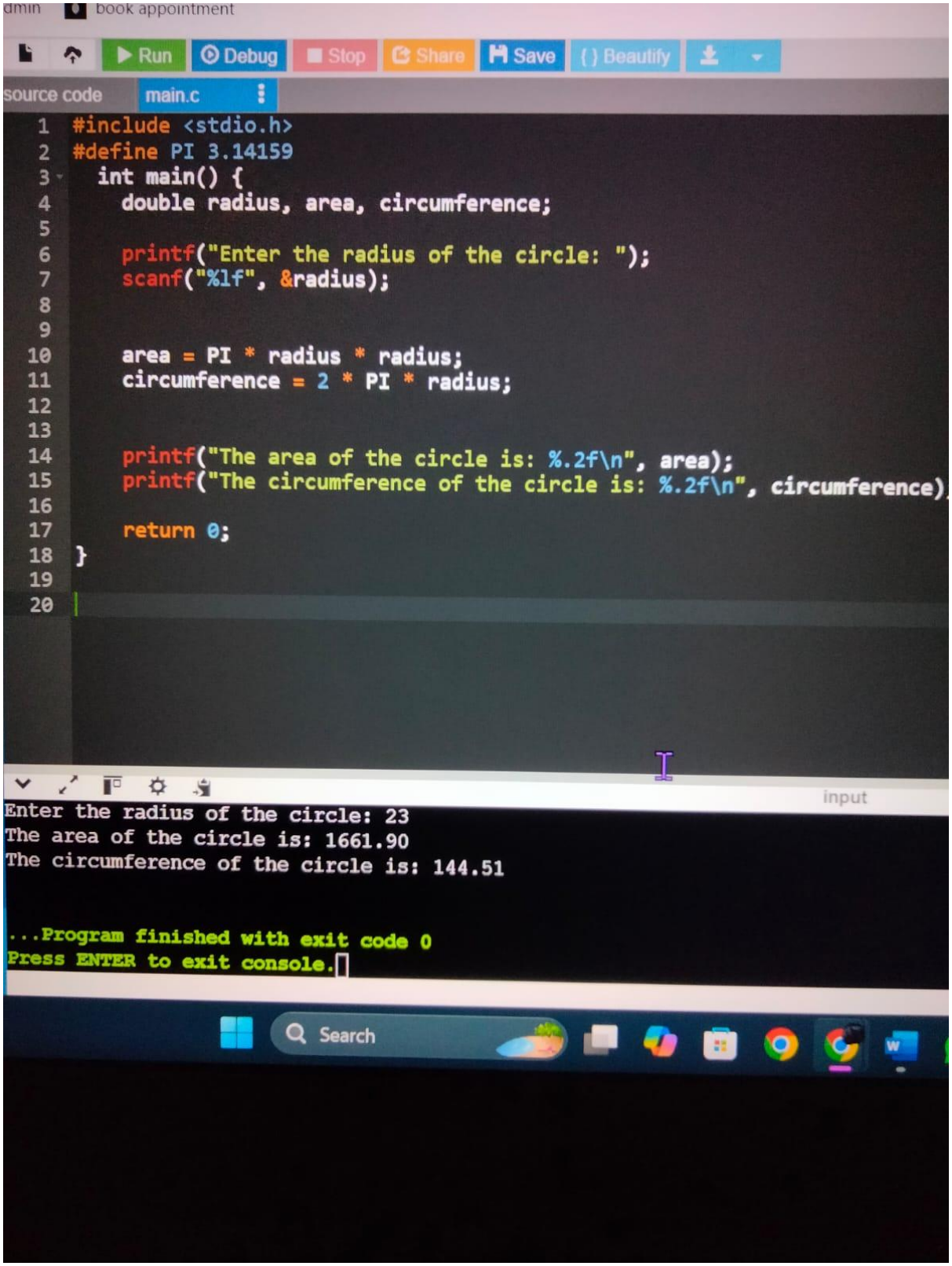
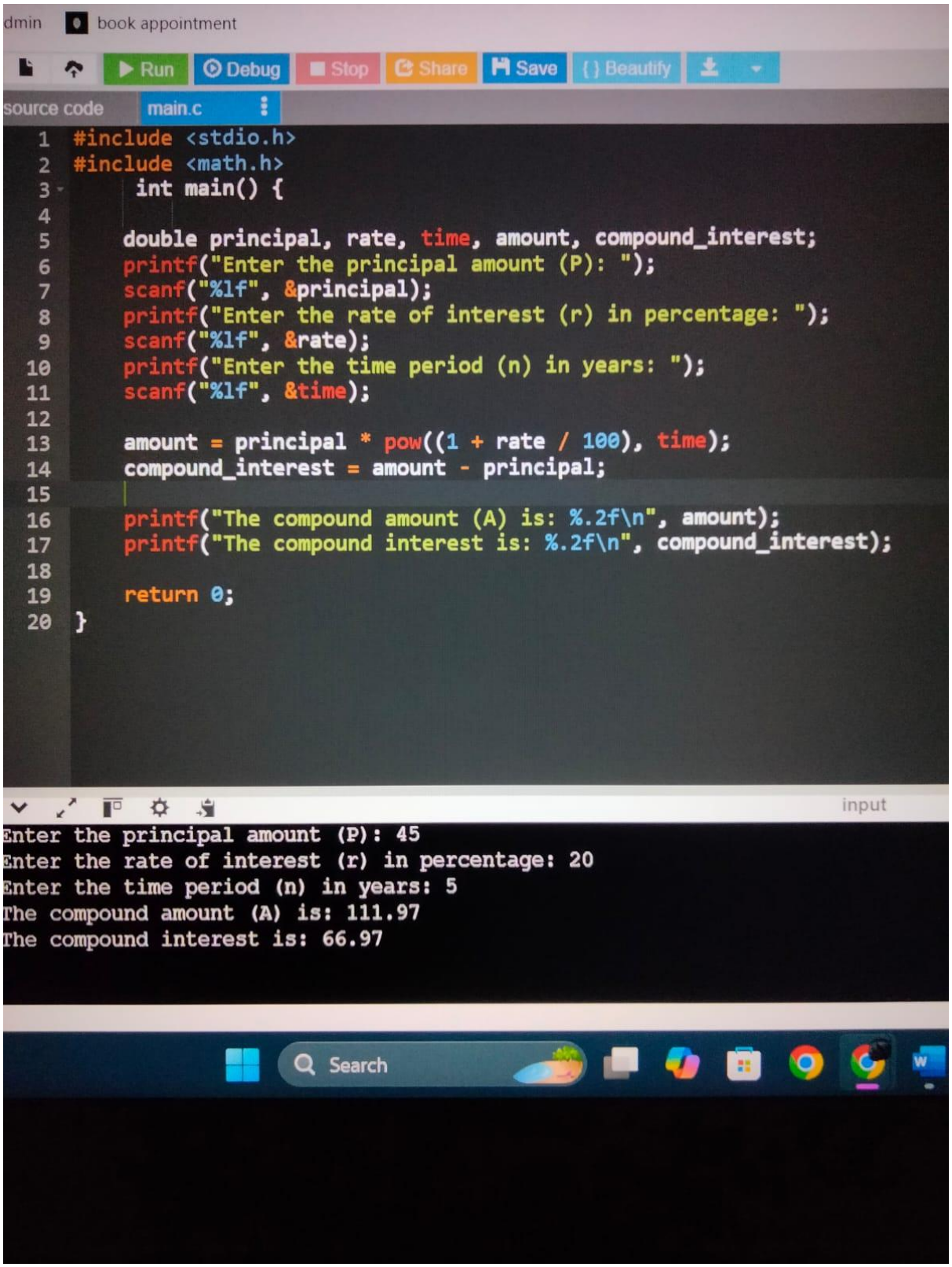
1-Write a program to calculate the circumference and area of a circle given its radius. Use the formulas: Area: πr^2 Circumference: 2πr



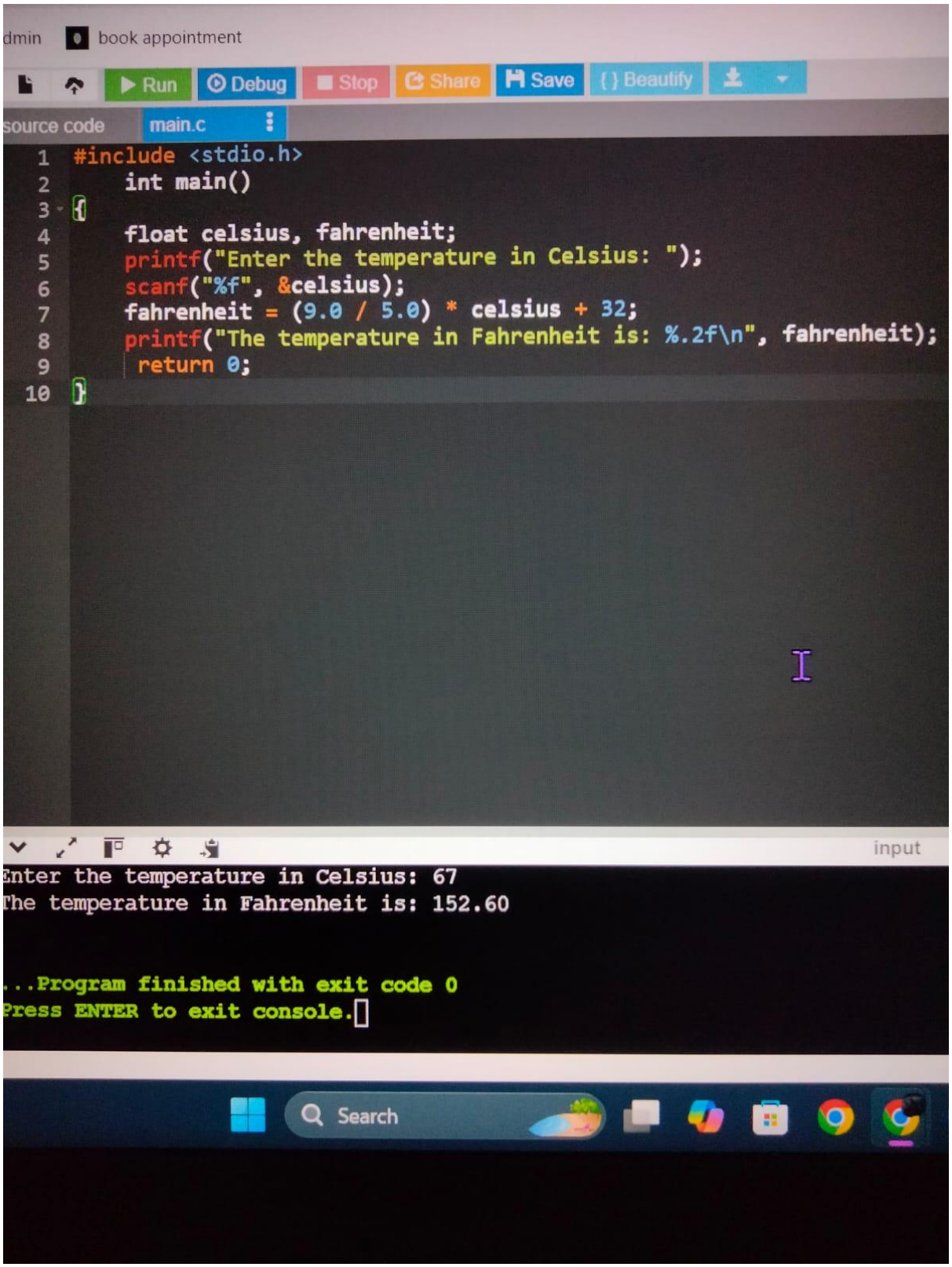
2. Write a program to calculate the compound interest using the formula:

A=P×(1+(r/100))^n where P is the principal, r is the rate of interest, and n is the time period.

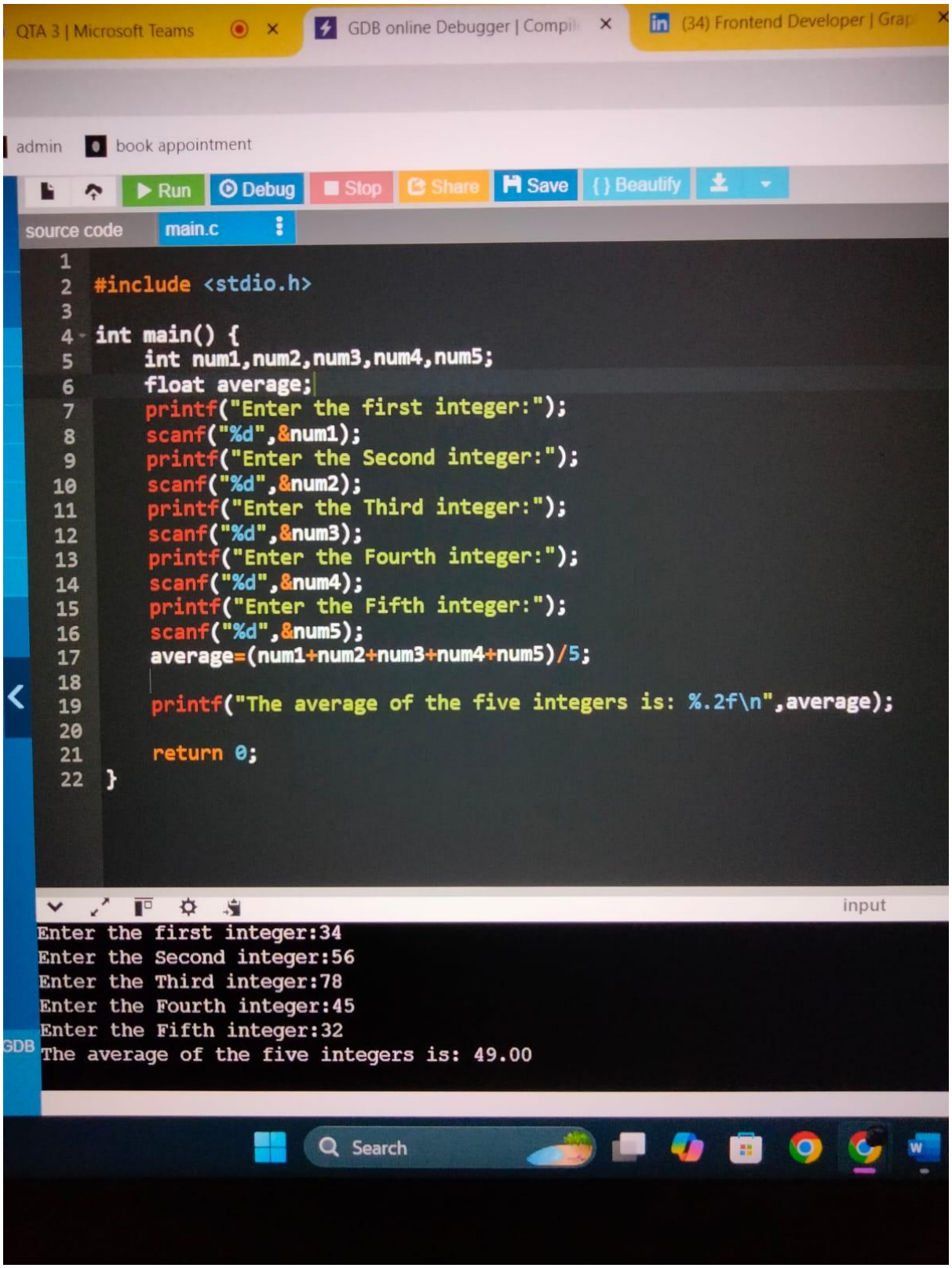


3-Write a program to convert a temperature from Celsius to Fahrenheit using the formula:

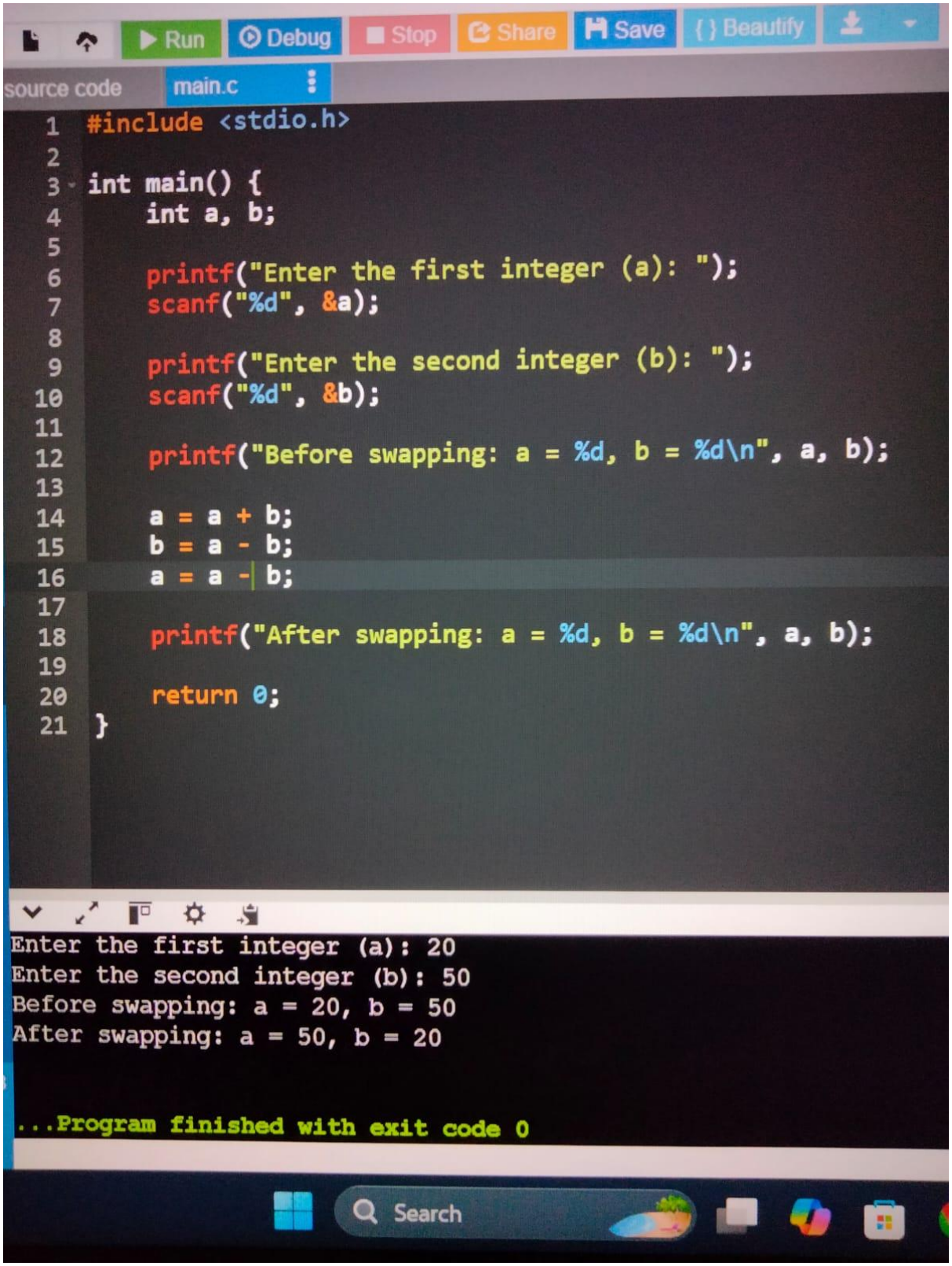
F=(9/5)*C+32



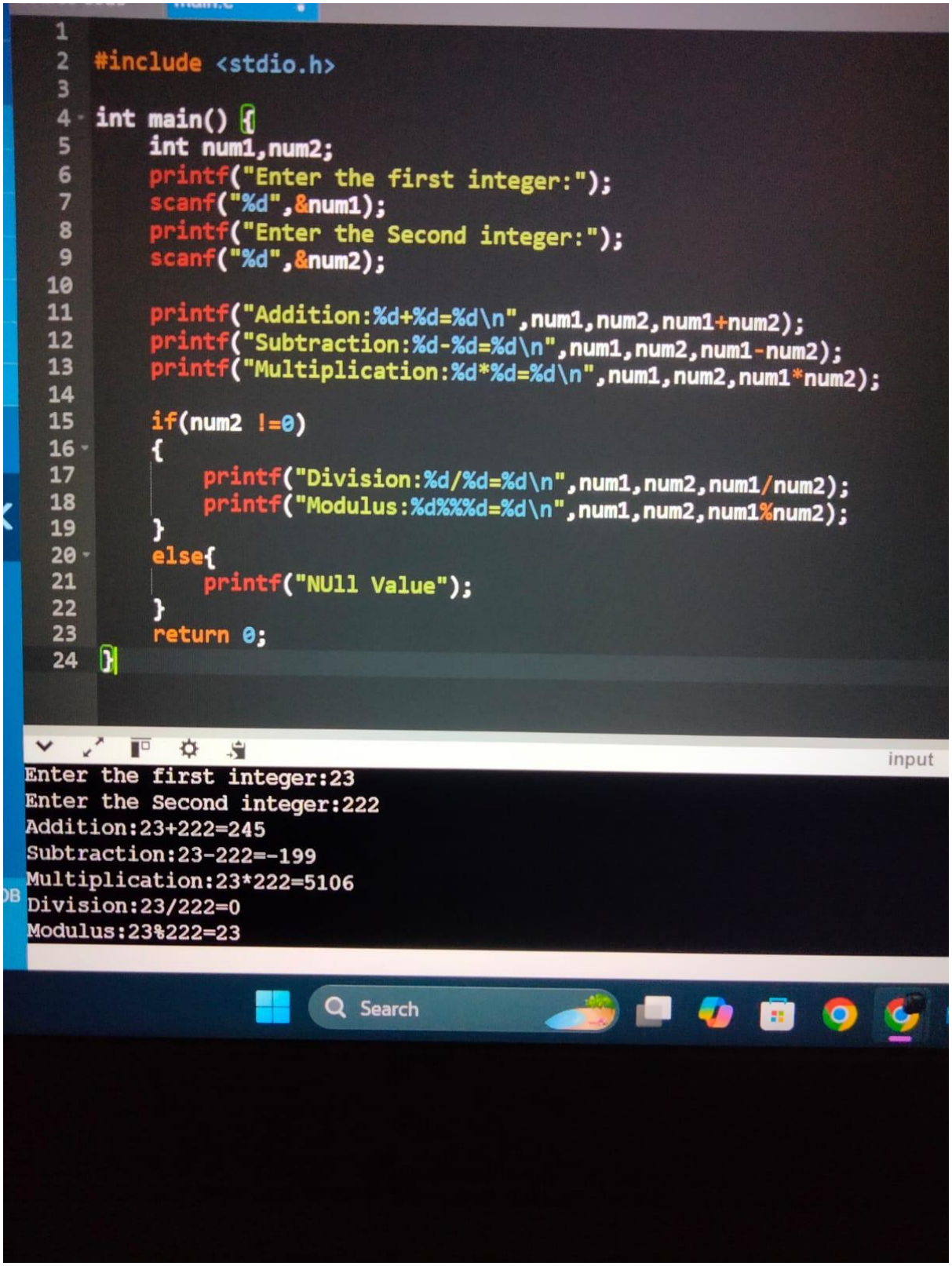
4-Write a program to calculate the average of five integers provided by the user.



5-Write a program to swap the values of two variables without using a third variable, relying only on arithmetic operations.



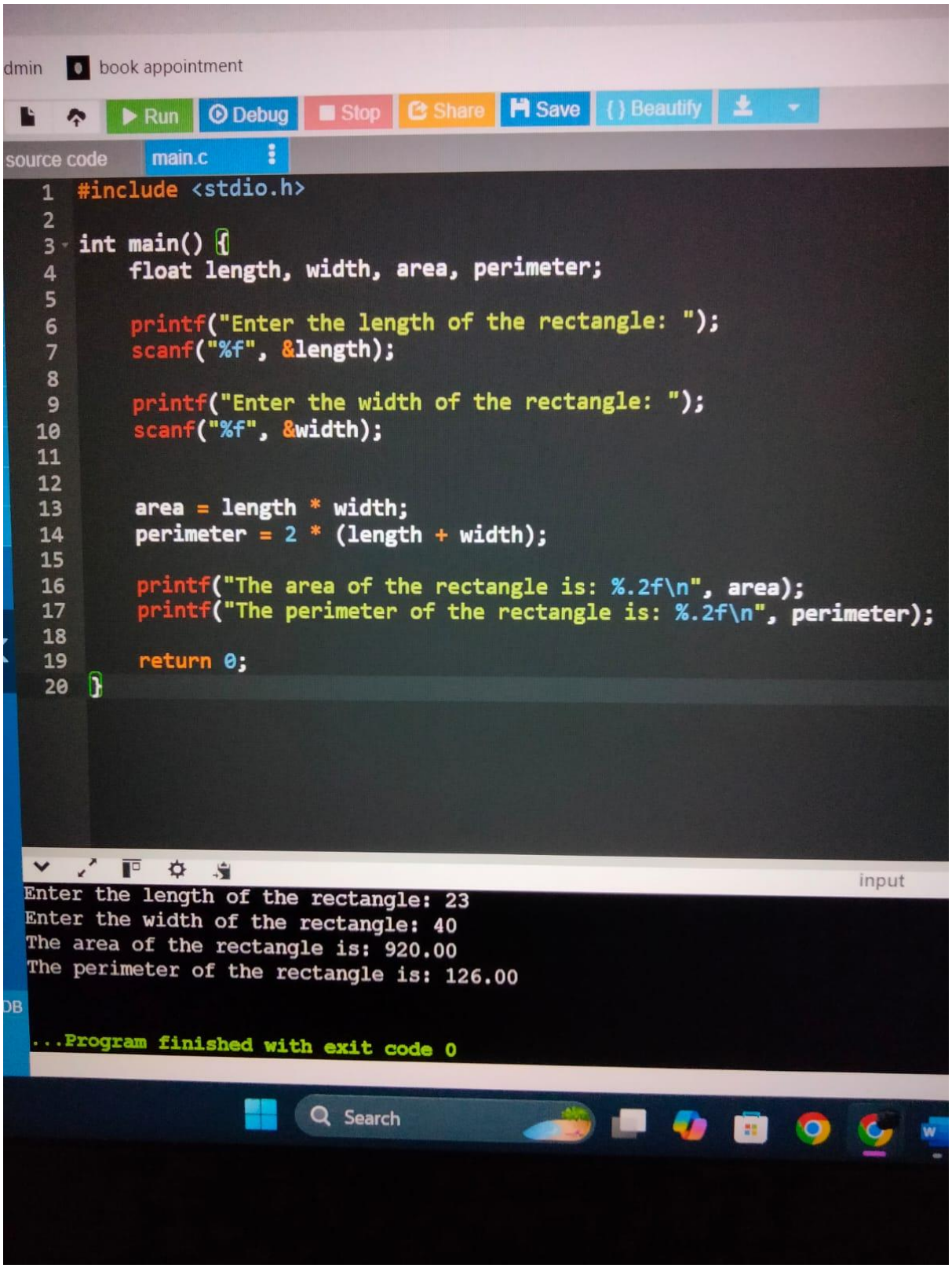
6-Write a program to perform addition, subtraction, multiplication, division, and modulus operations on two user-provided integers.



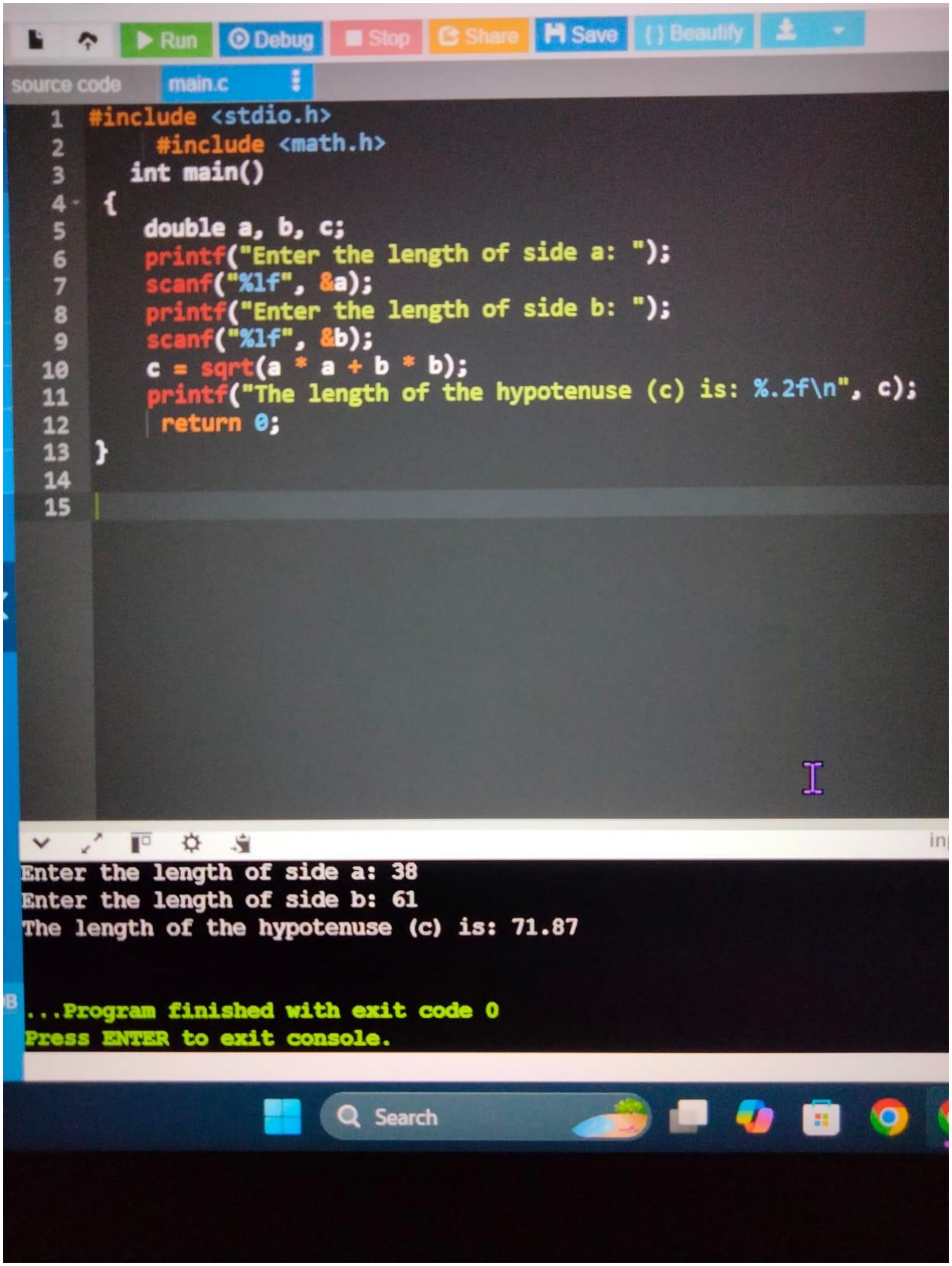
```c
#include <stdio.h>

int main() {
    int num1,num2;
    printf("Enter the first integer:");
    scanf("%d",&num1);
    printf("Enter the Second integer:");
    scanf("%d",&num2);

    printf("Addition:%d+%d=%d\n",num1,num2,num1+num2);
    printf("Subtraction:%d-%d=%d\n",num1,num2,num1-num2);
    printf("Multiplication:%d*%d=%d\n",num1,num2,num1*num2);

    if(num2 !=0)
    {
        printf("Division:%d/%d=%d\n",num1,num2,num1/num2);
        printf("Modulus:%d%%%d=%d\n",num1,num2,num1%num2);
    }
    else{
        printf("NUll Value");
    }
    return 0;
}
```

```
input
Enter the first integer:23
Enter the Second integer:222
Addition:23+222=245
Subtraction:23-222=-199
Multiplication:23*222=5106
Division:23/222=0
Modulus:23%222=23
```

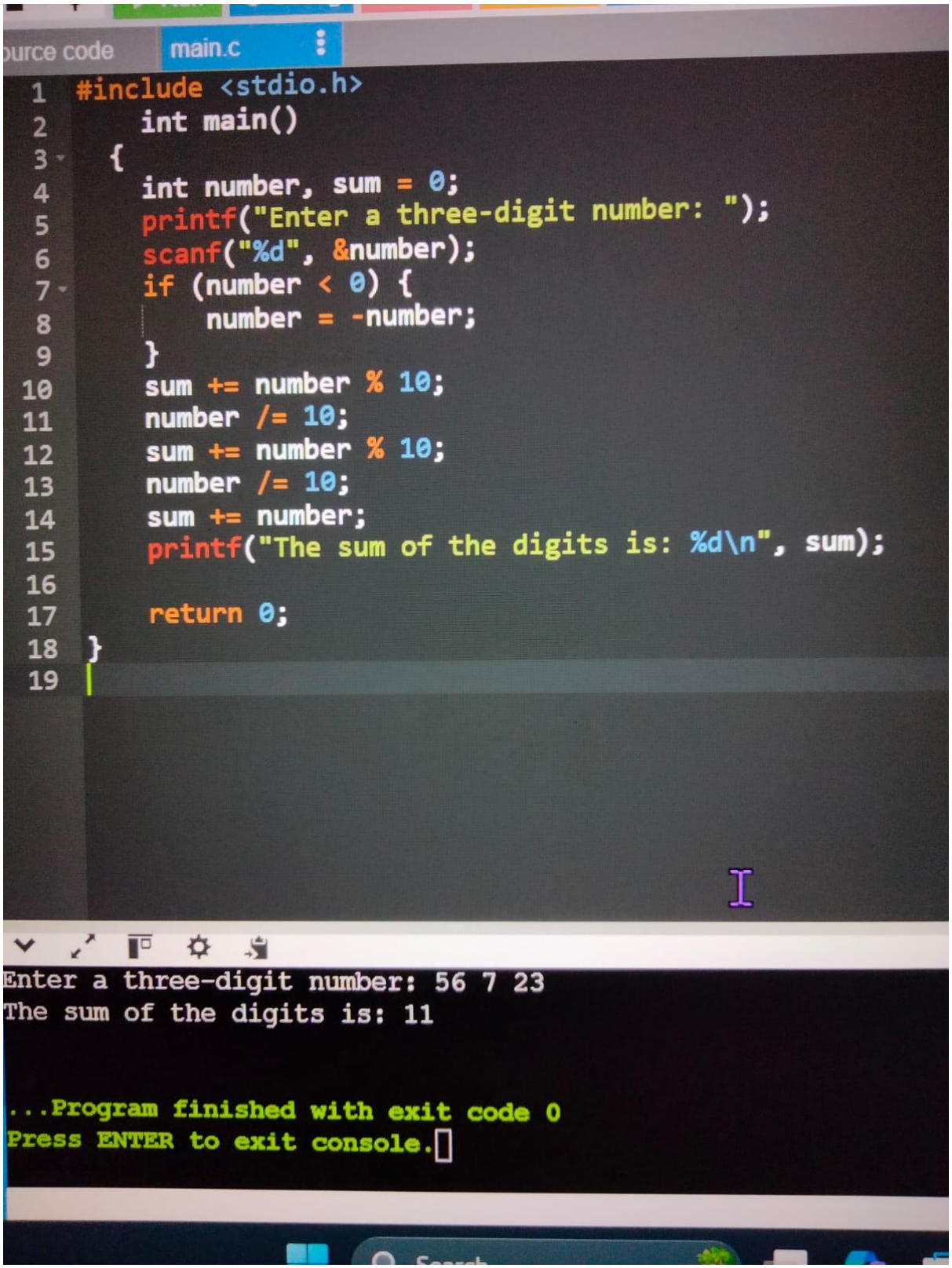
7-Compute and display the area and perimeter of a rectangle given its length and width.



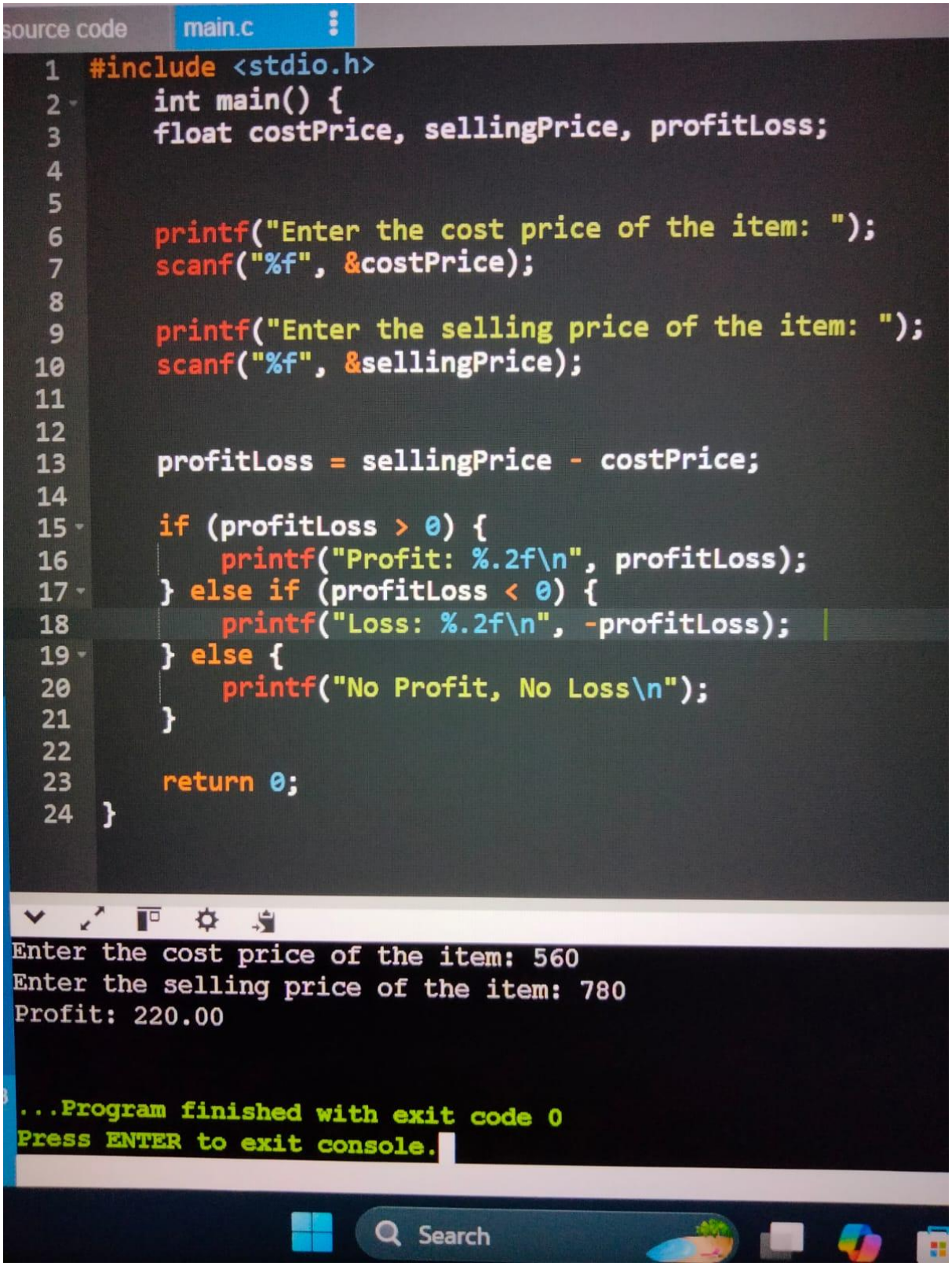
8-Calculate the hypotenuse of a right triangle given the lengths of the other two sides using the formula: C = root over of (a^2 + b^2)



9-Write a program to find the sum of the digits of a given three-digit number.

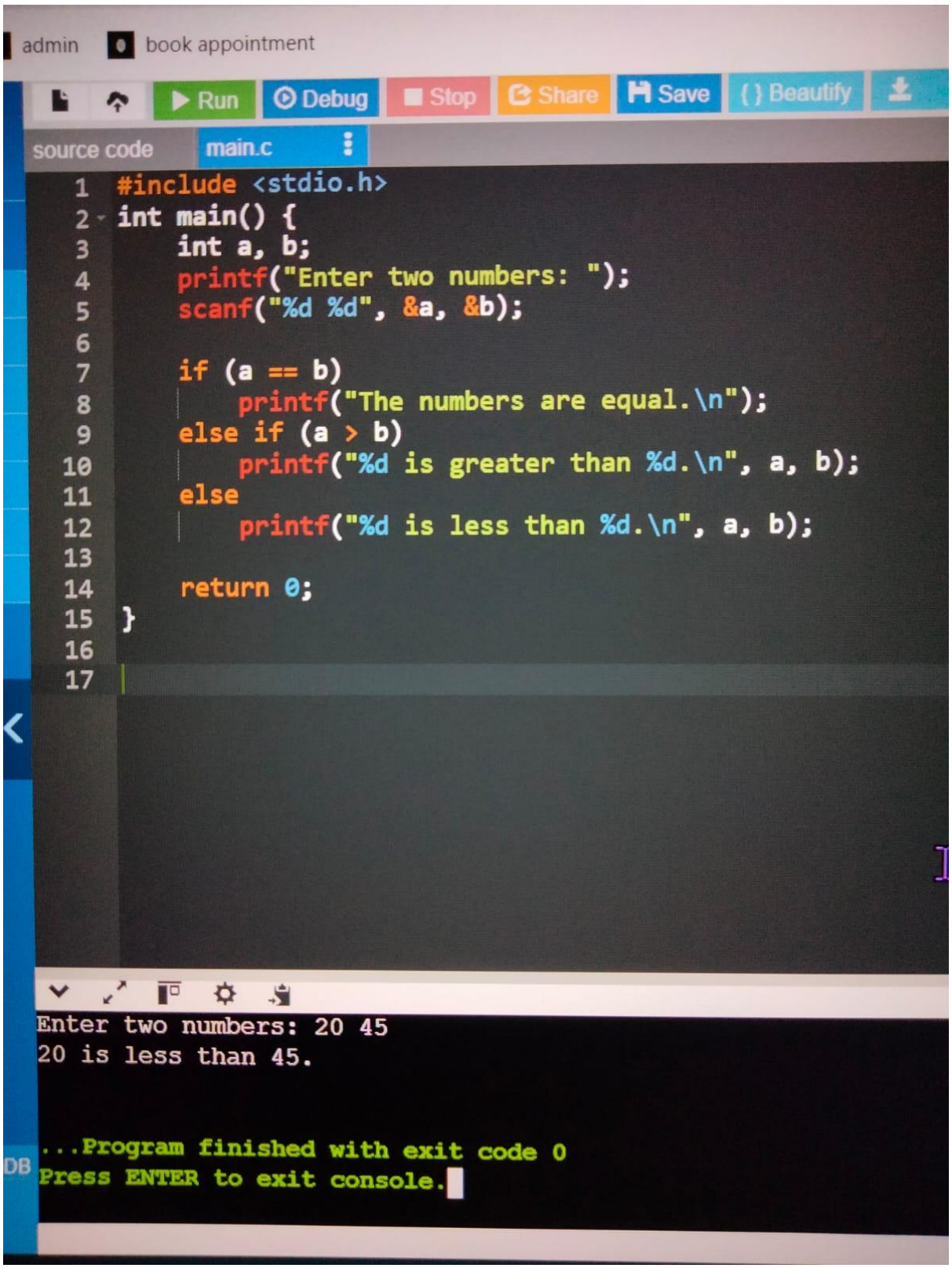


10-Write a program to calculate the profit or loss made on a transaction given the cost price and selling price of an item.



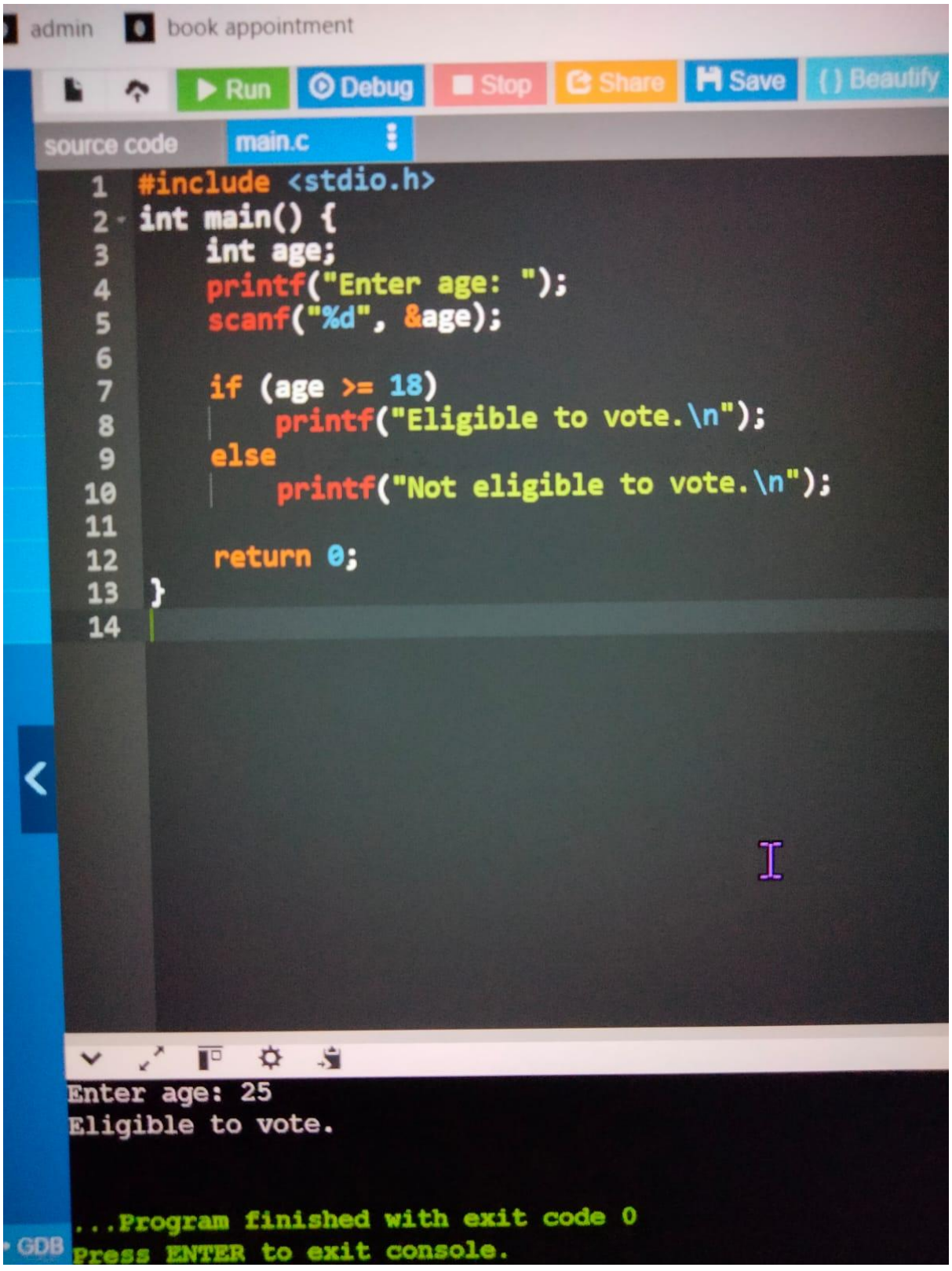
11-Compare Two Numbers:

Write a program to check if two integers are equal, not equal, greater than, or less than each other using relational operators.



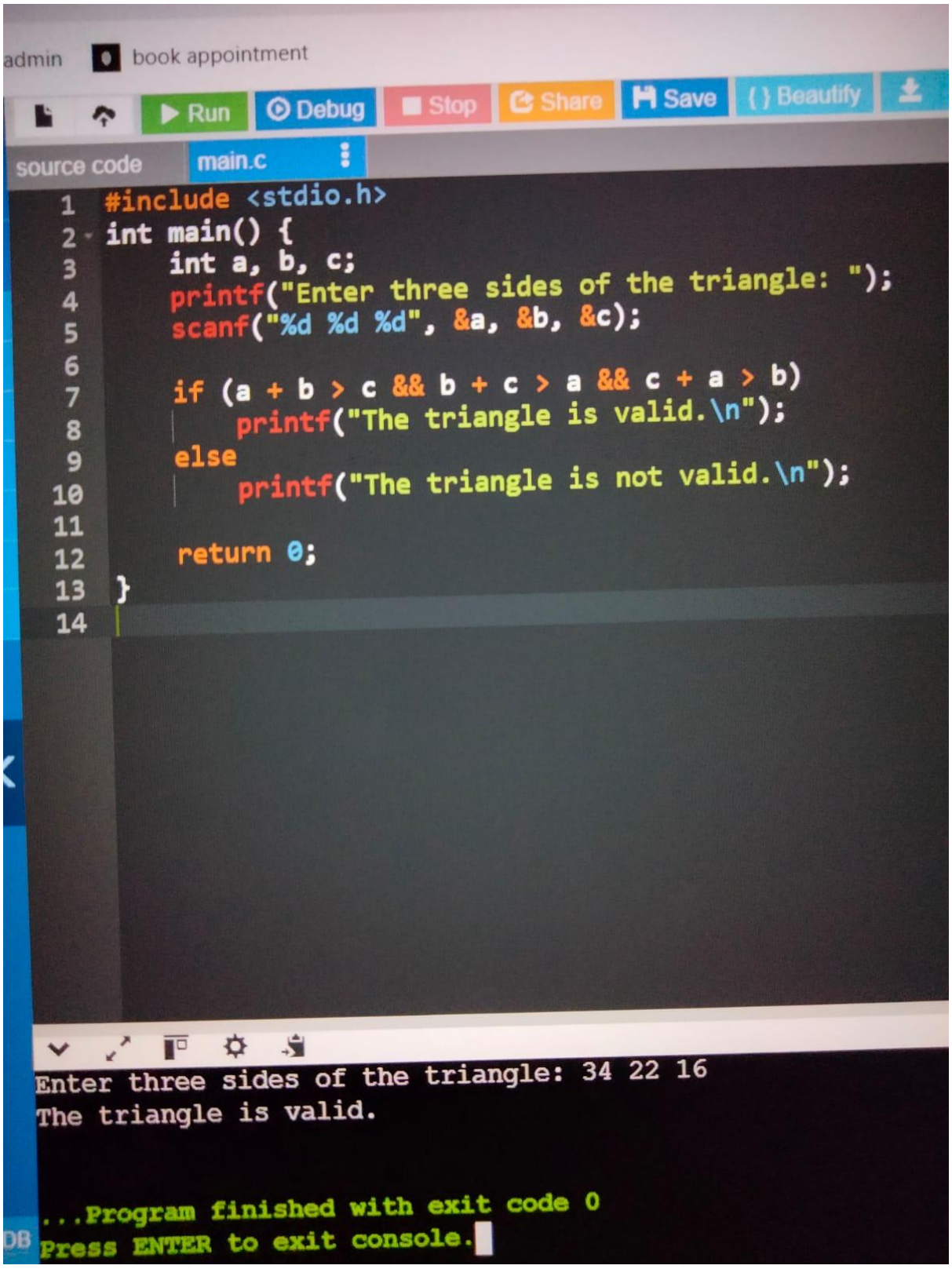
12-Eligibility for Voting:

Determine whether a person is eligible to vote based on their age (age must be greater than or equal to 18).



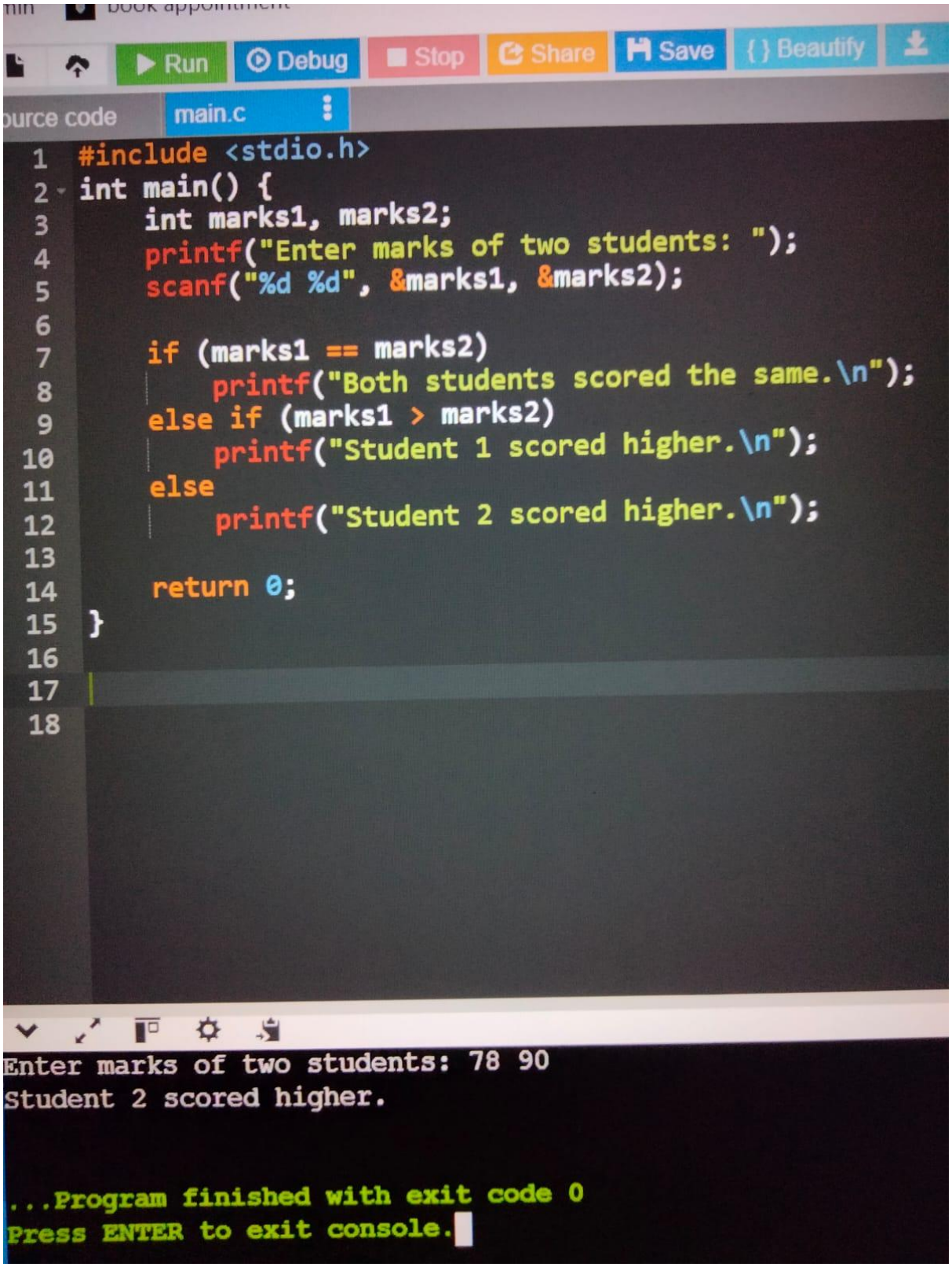
13-Triangle Validity Check:

Given three sides of a triangle, use relational operators to check if the triangle is valid (the sum of any two sides must be greater than the third side).



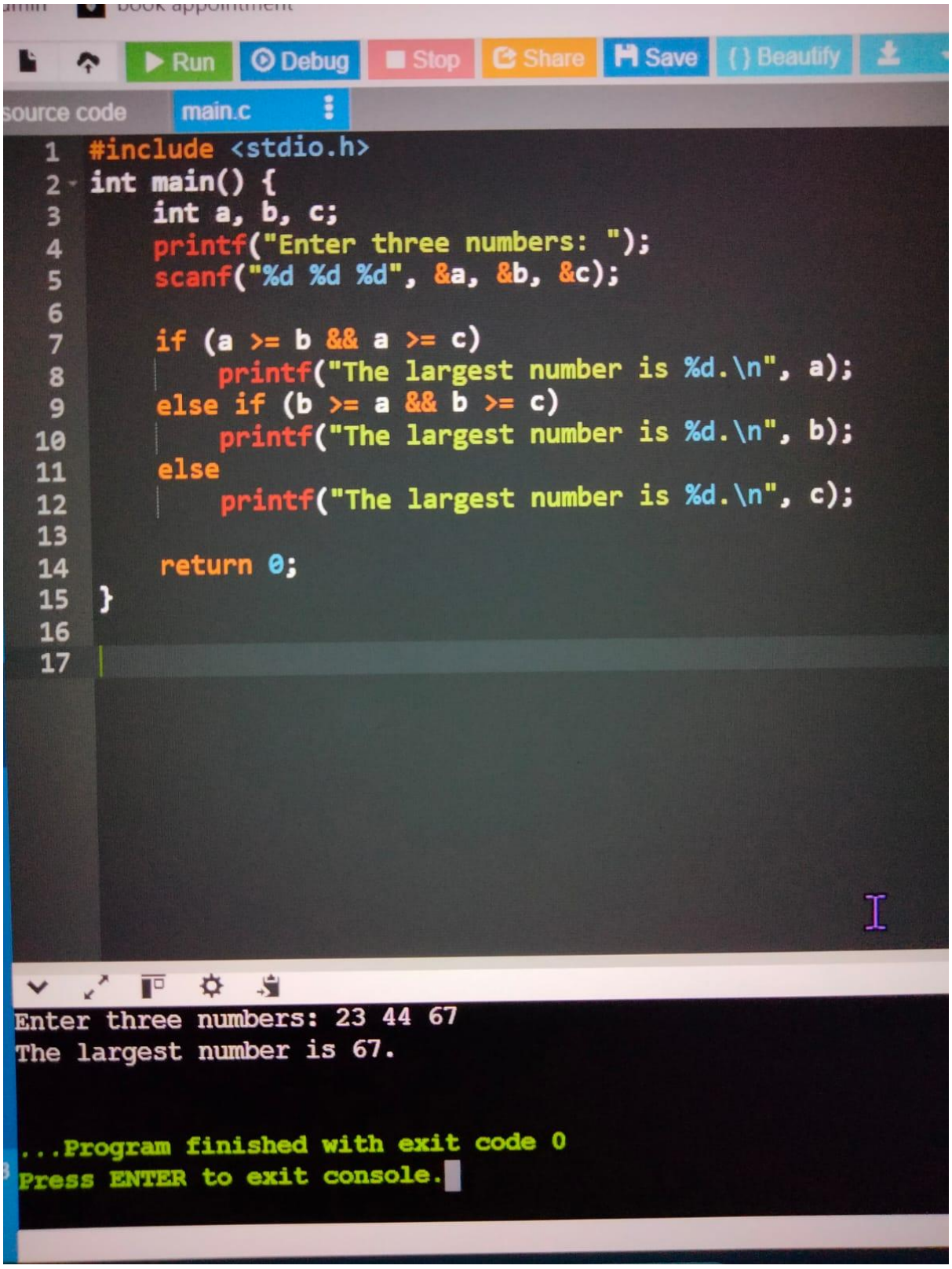
14-Student Grade Comparison:

Compare the marks of two students to determine who scored higher, or if they have the same marks.



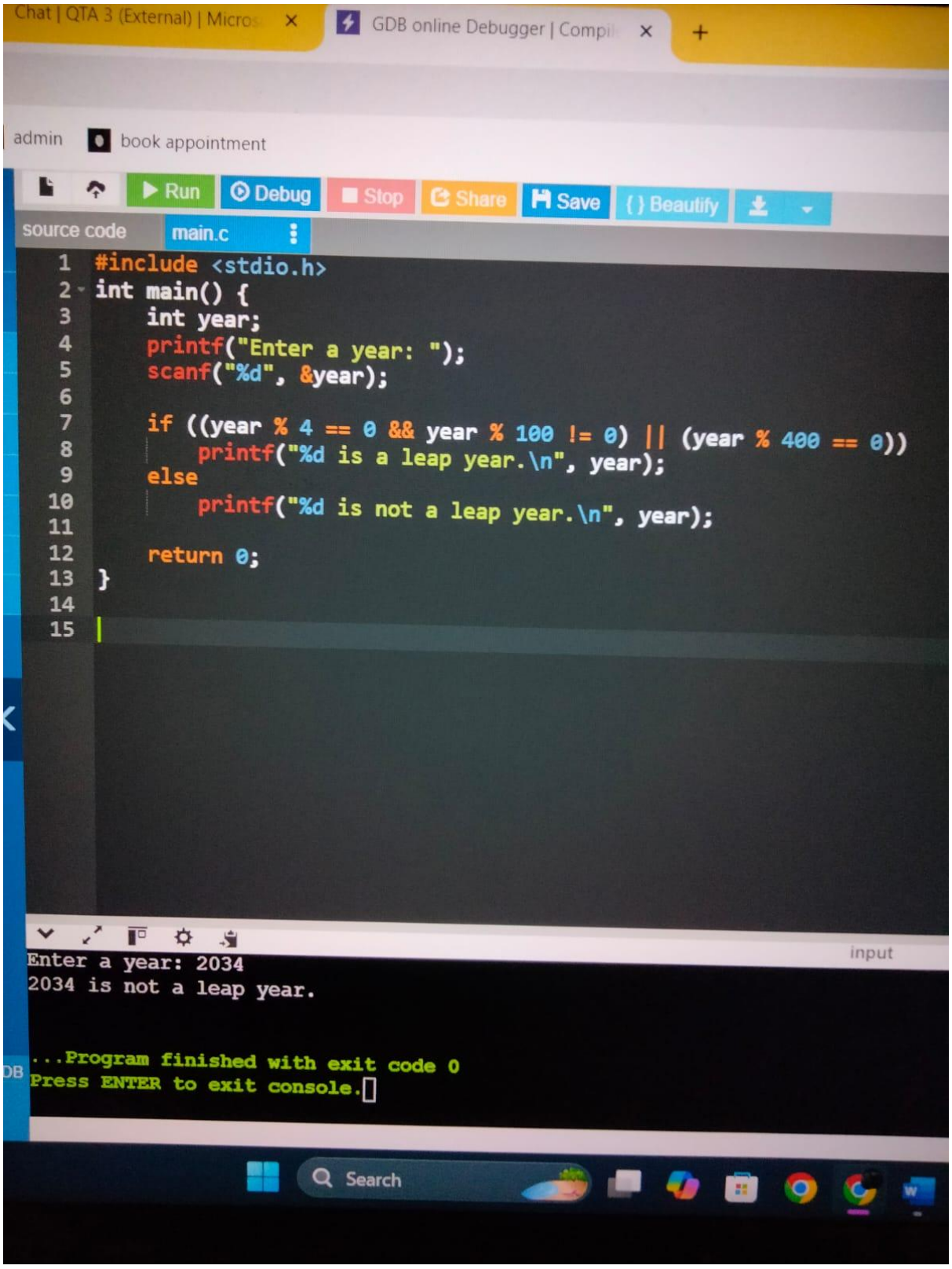
15-Find the Largest of Three Numbers:

Write a program to compare three numbers and determine the largest number using relational operators.



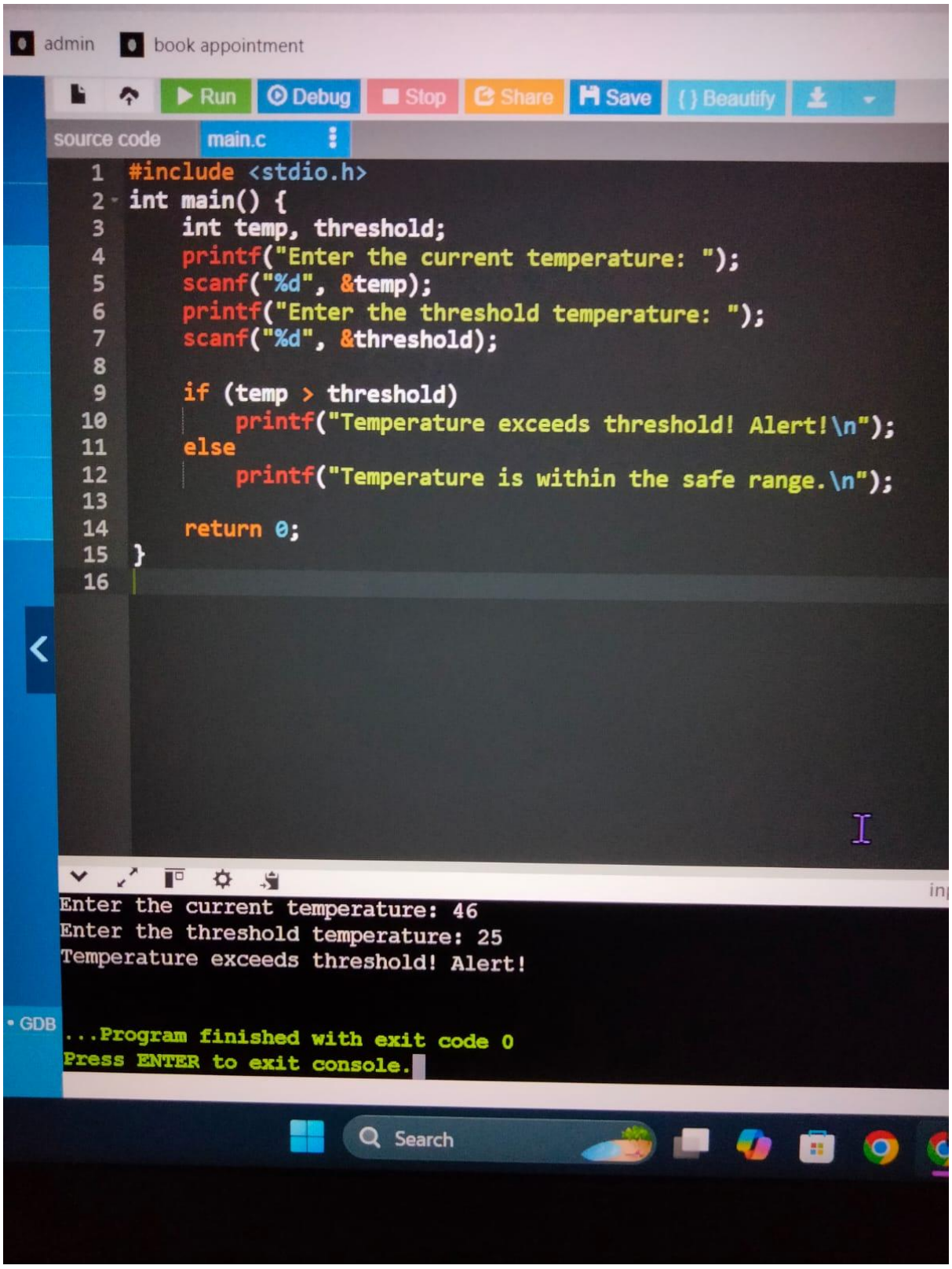
16-Leap Year Check:

Use relational operators to determine if a given year is a leap year (divisible by 4 but not by 100 unless divisible by 400).



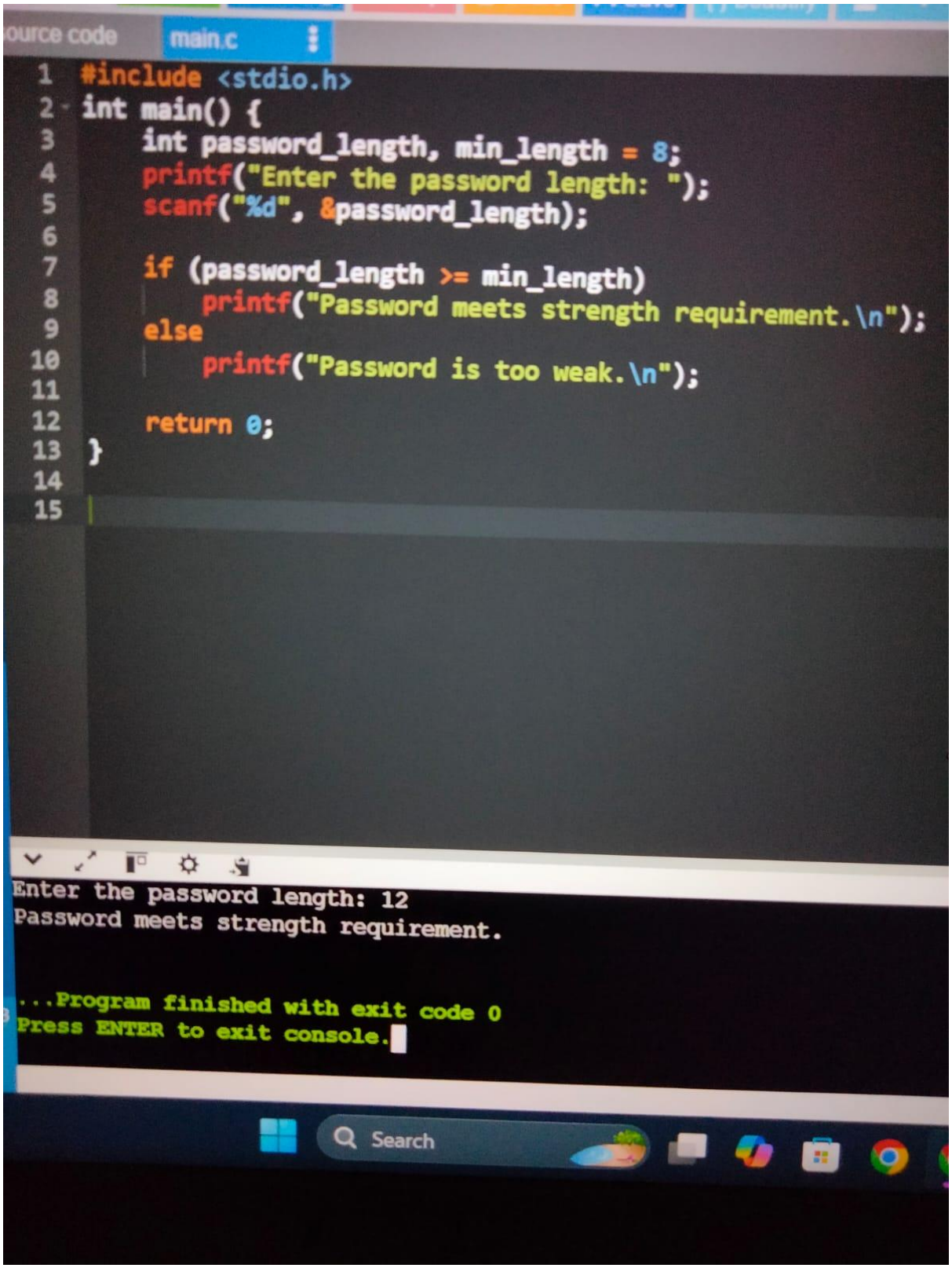
17-Temperature Alert:

Write a program to check if the temperature exceeds a threshold value (e.g., greater than 40 degrees Celsius) and display an alert message.



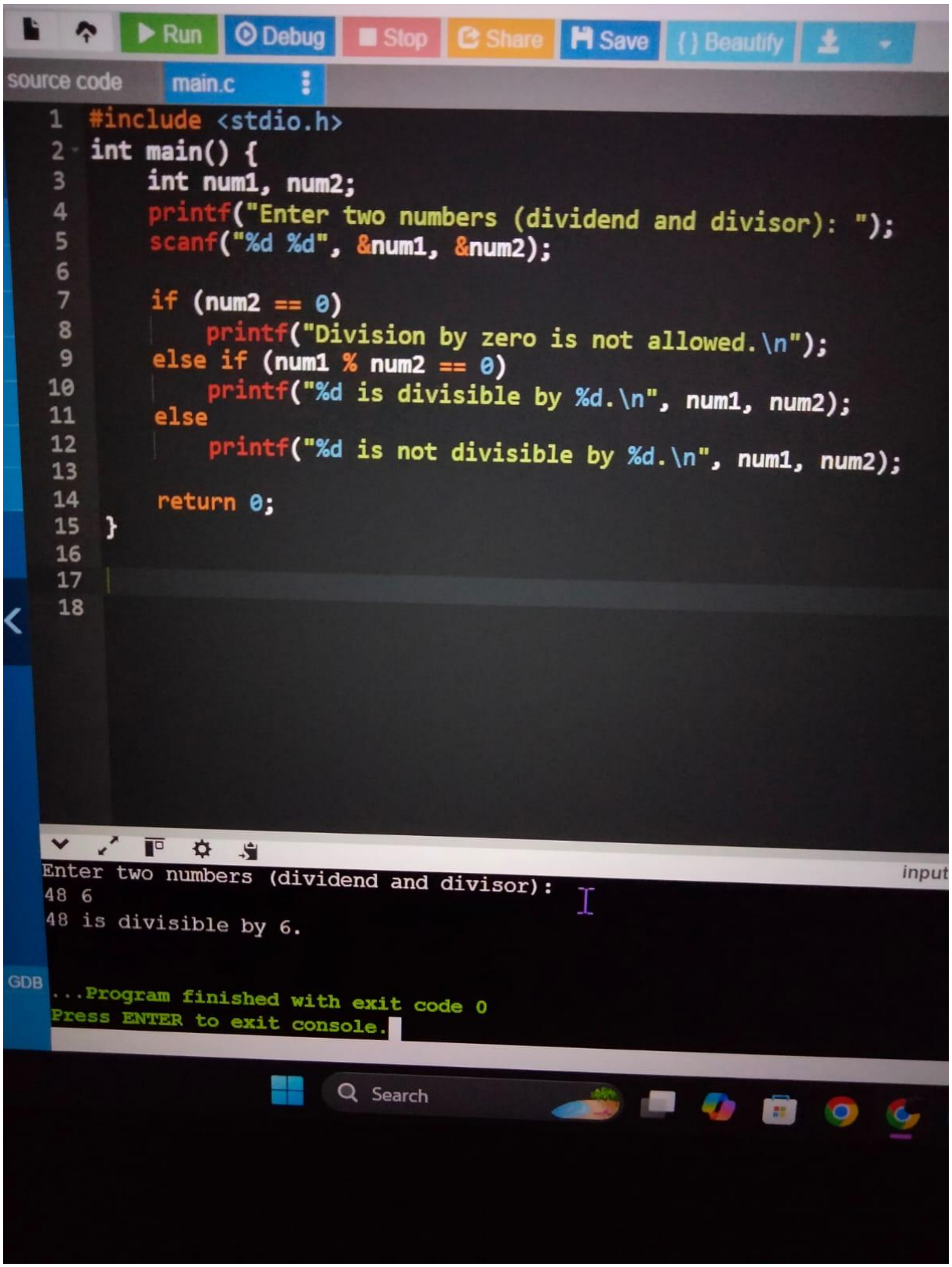
18-Password Strength Validation:

Given the length of a password, check if it meets the minimum requirement of 8 characters using relational operators.



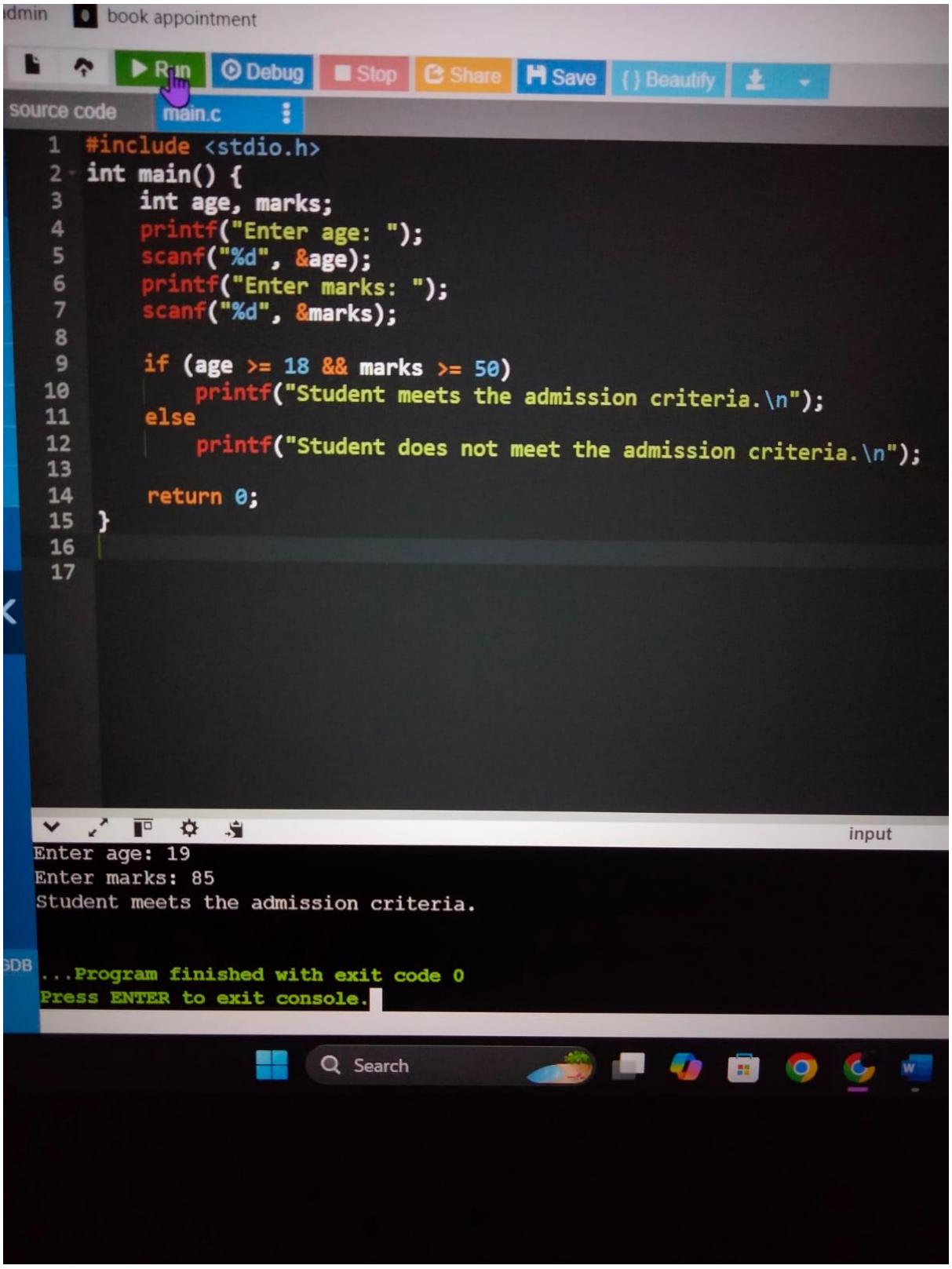
19-Check Divisibility:

Write a program to determine if one number is divisible by another using relational operators.

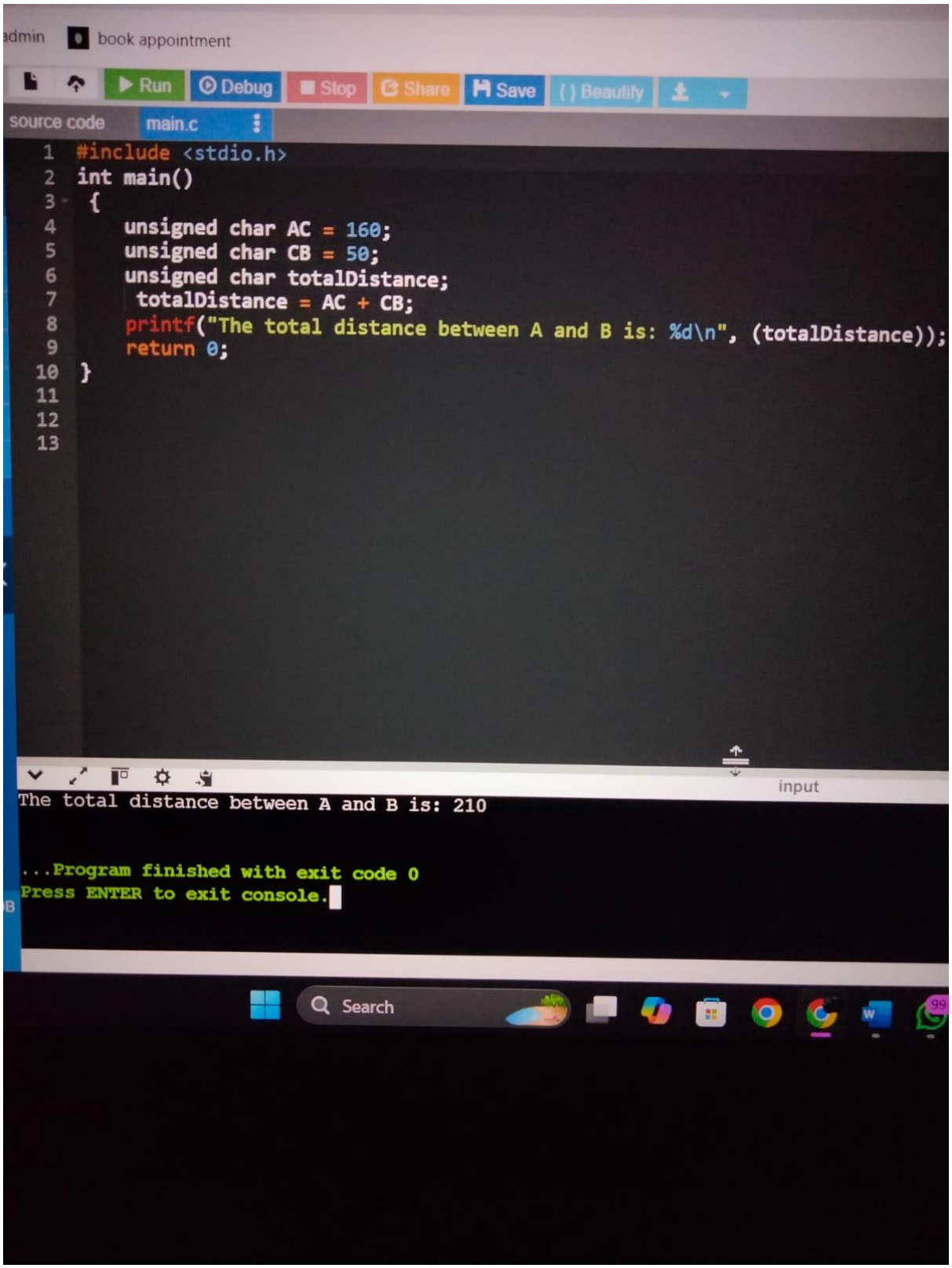


20-Admission Criteria:

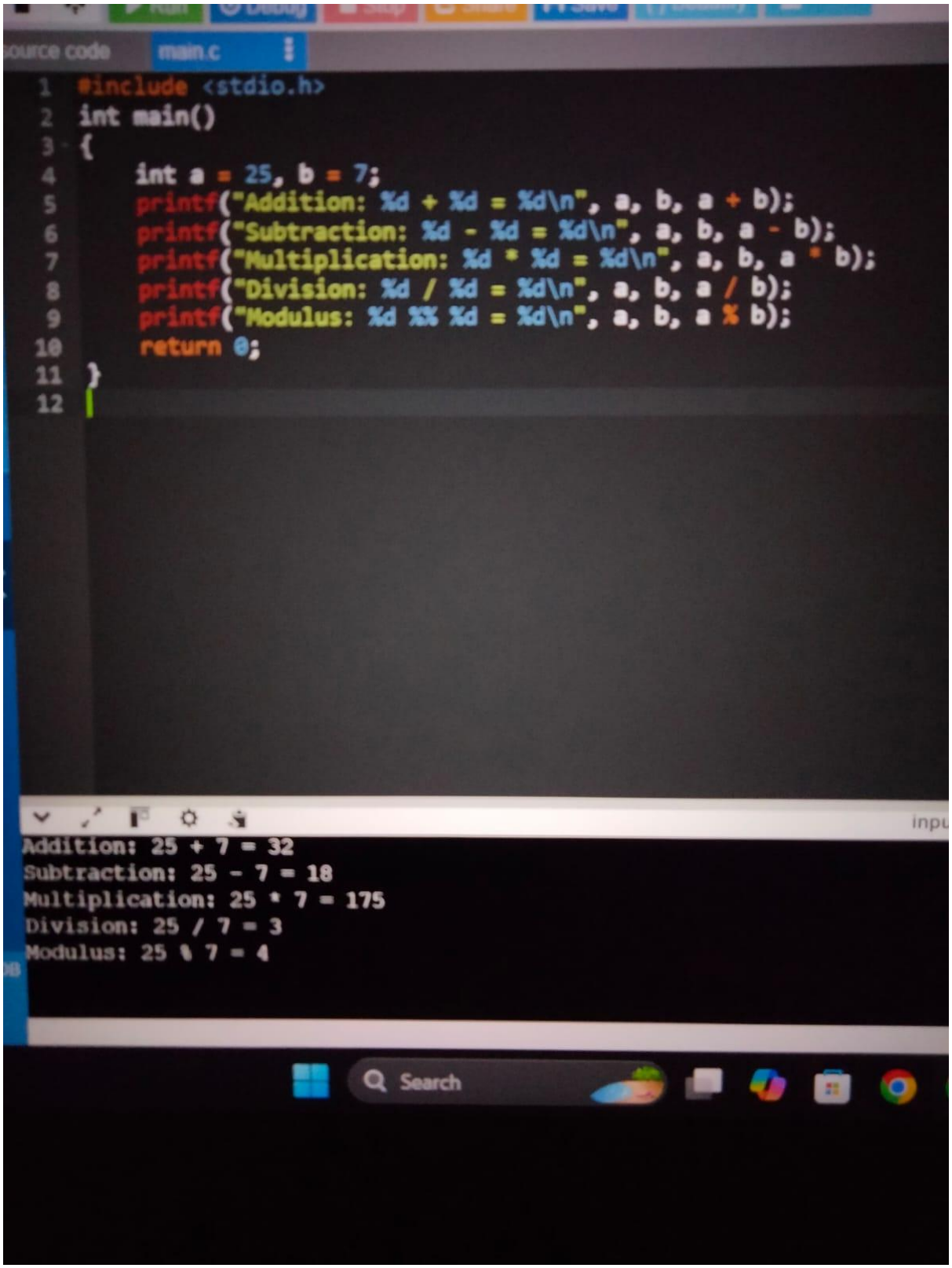
Check if a student meets the criteria for admission to a course based on their age (greater than or equal to 18) and marks (greater than or equal to 50)



21-Calculate the total distance between a and b were ac=160 and cb=50



22-Write a program for all the usage of arithmetic operators



23- Relational Operators