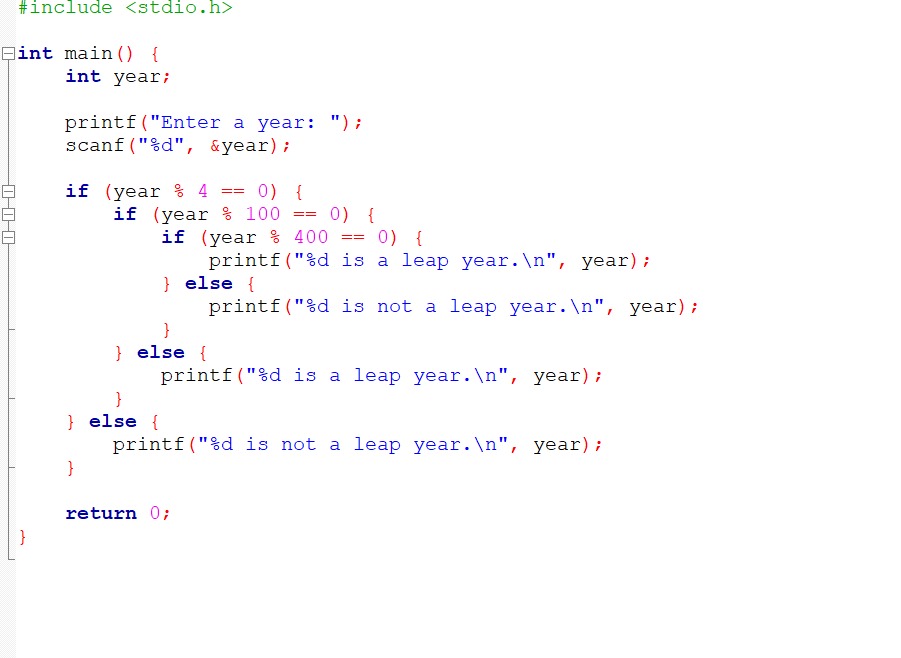
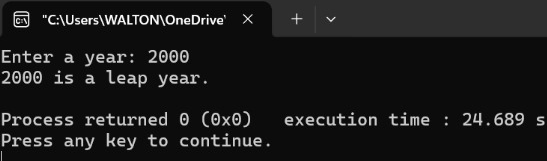
**CSE 114 -Lab Report**

**Conditional Statement (If, if else, if else if ladder, nested if-else, switch)**

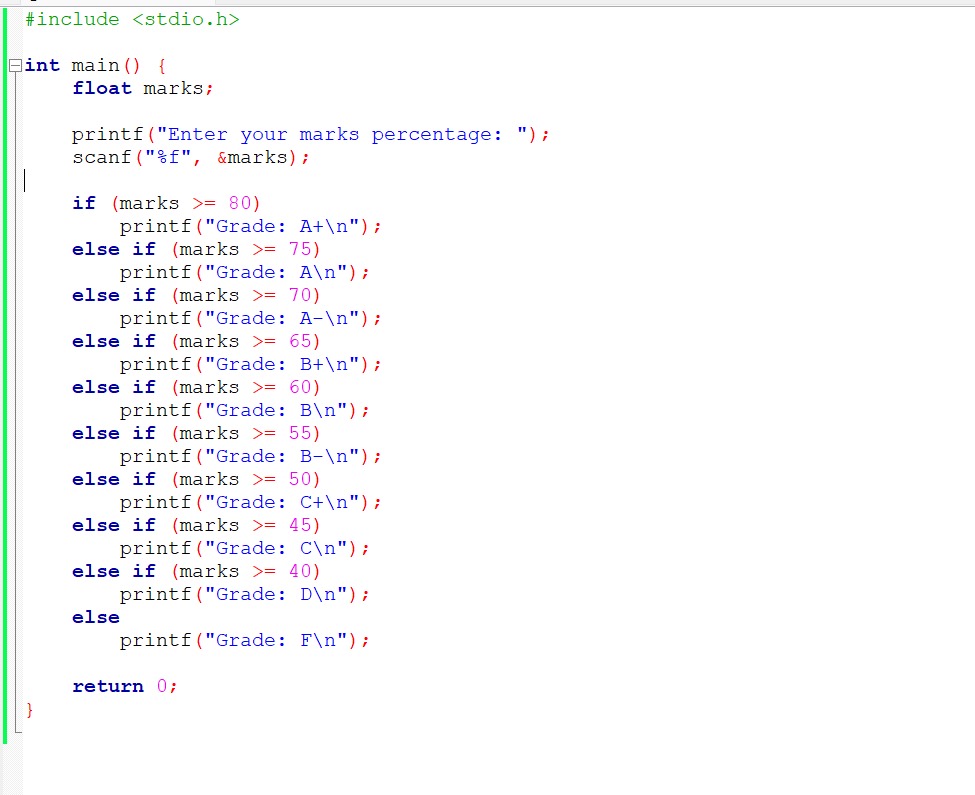
**Write a program in C to check whether a year is a leap year using if...else statements.**



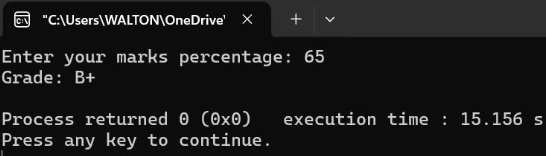
**OUTPUT**

****

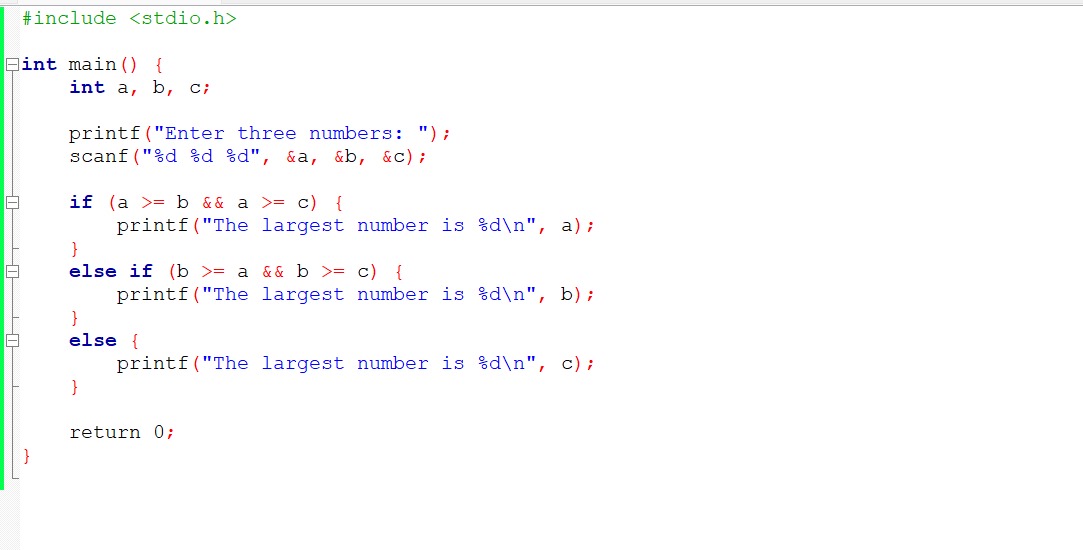
**Write a program in C to calculate a student's grade based on marks using only if...else statements (no loops).**

****

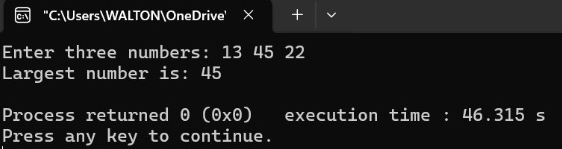
**OUTPUT**

****

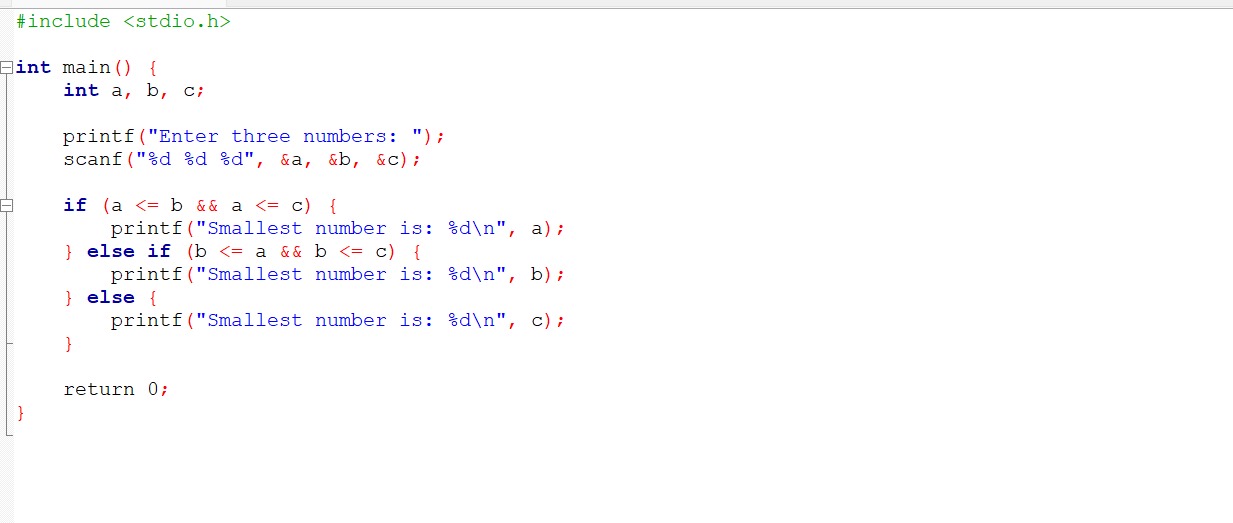
**Write a program in C to find the largest of three numbers using if...else statements.**

****

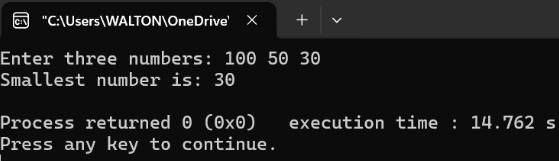
**OUTPUT**

****

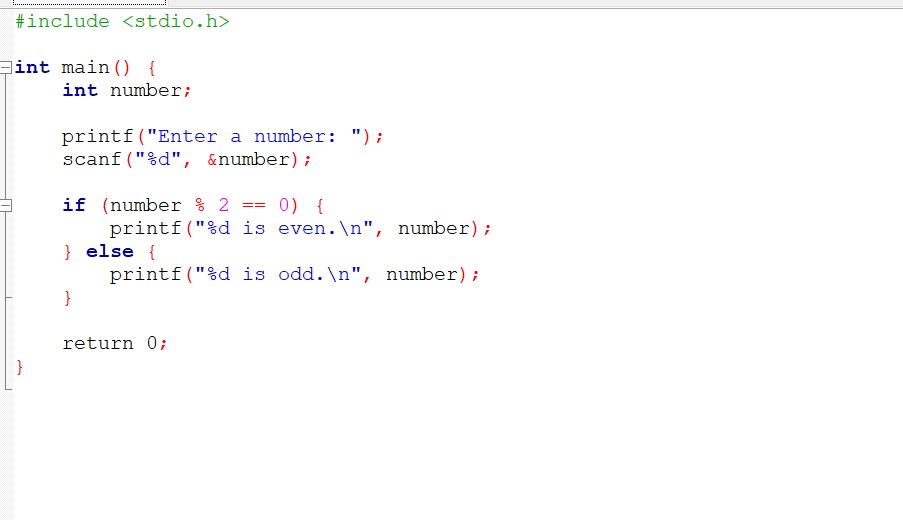
**Write a program in C to find the smallest of three numbers using if...else statements.**

****

**OUTPUT**

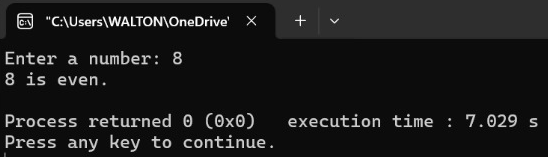
****

**Write a program in C to check whether a number is even or odd using if...else statements.**

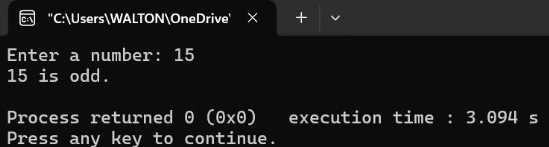
****

**OUTPUT**

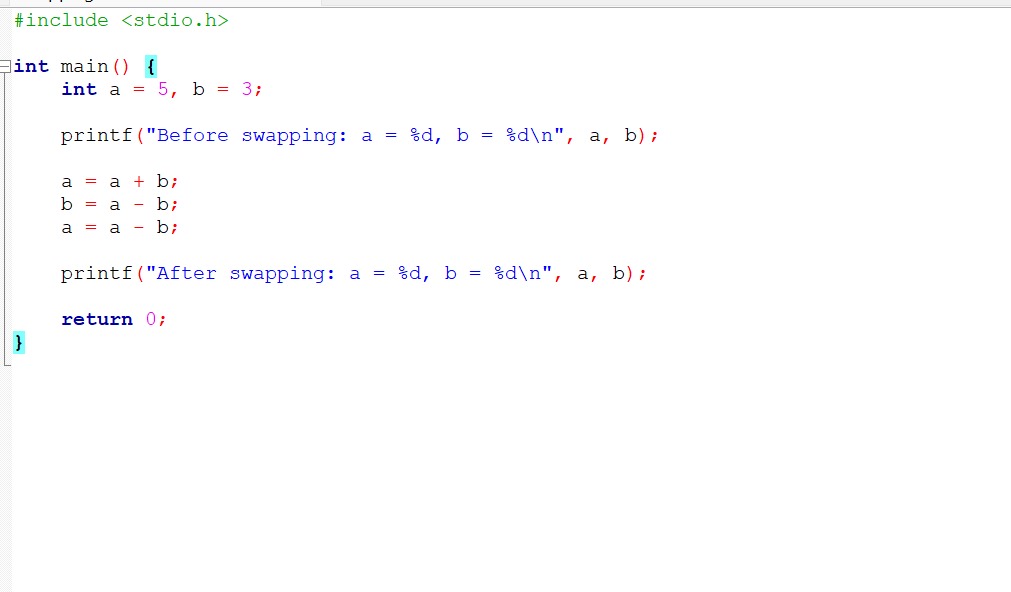
* **Even:**

****

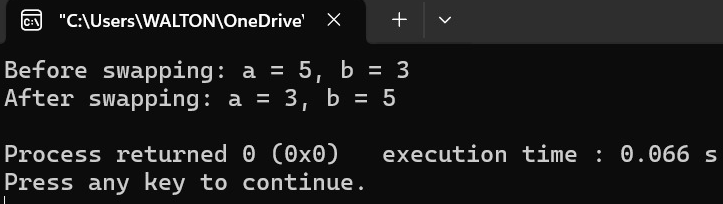
* **Odd:**

****

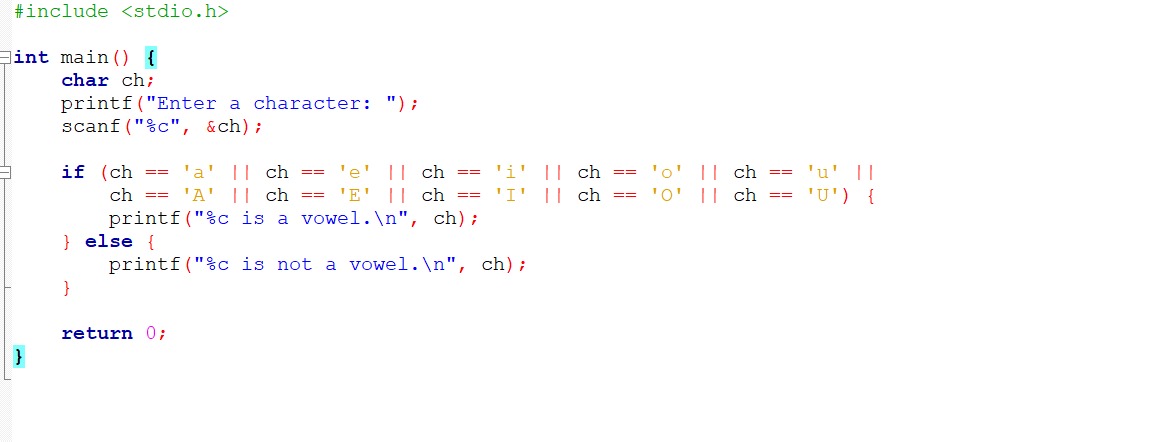
**Write a program in C to swap two numbers without using an extra variable.**

****

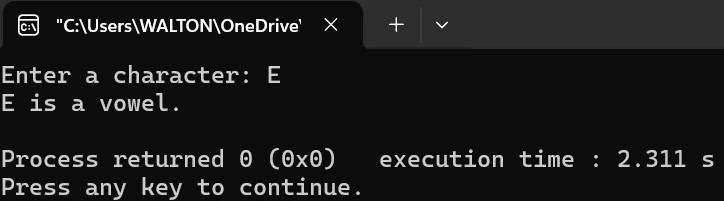
**OUTPUT**

****

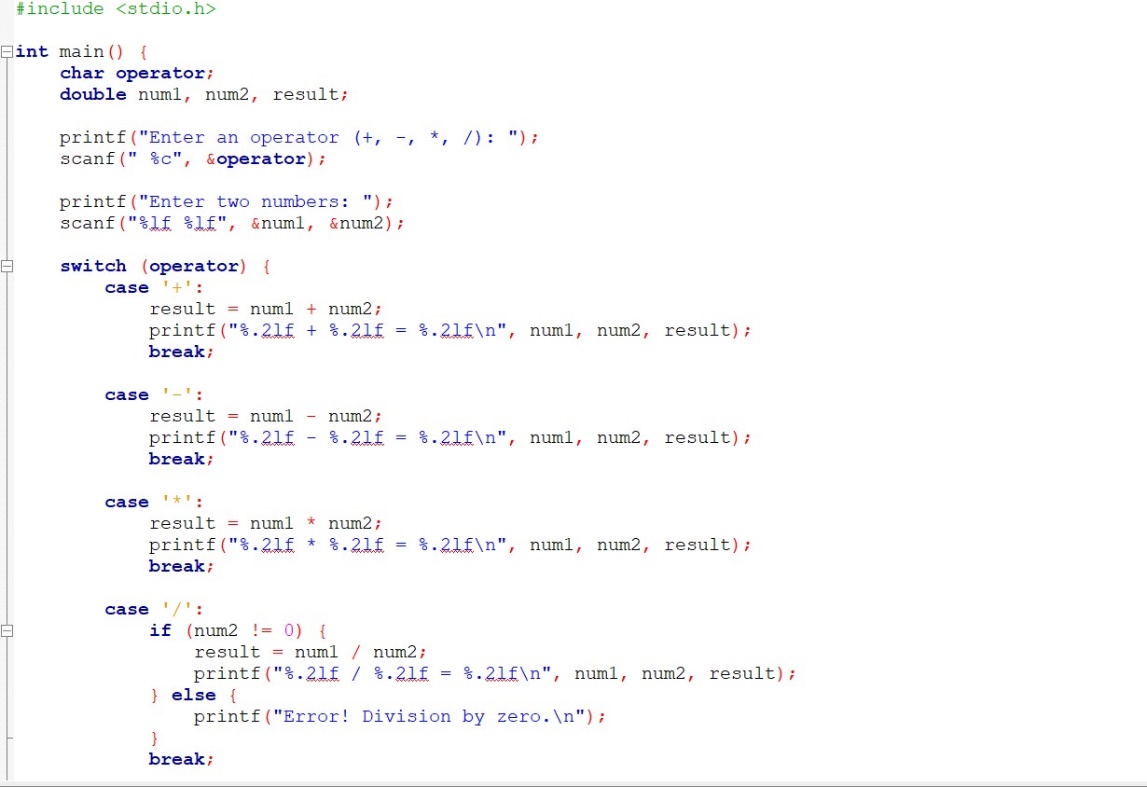
**Write a program in C to check whether a given character is a vowel or not using if...else statements.**

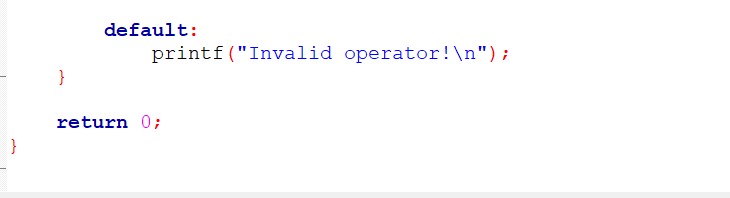
****

**OUTPUT**

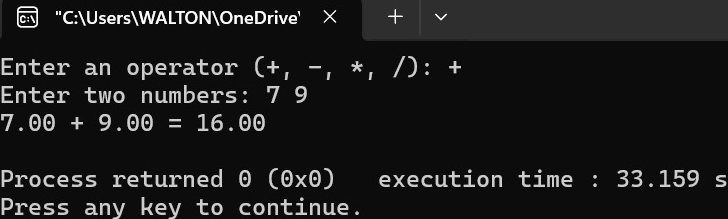
****

**Write a calculator program in C that performs addition, subtraction, multiplication, and division using switch statements.**

****

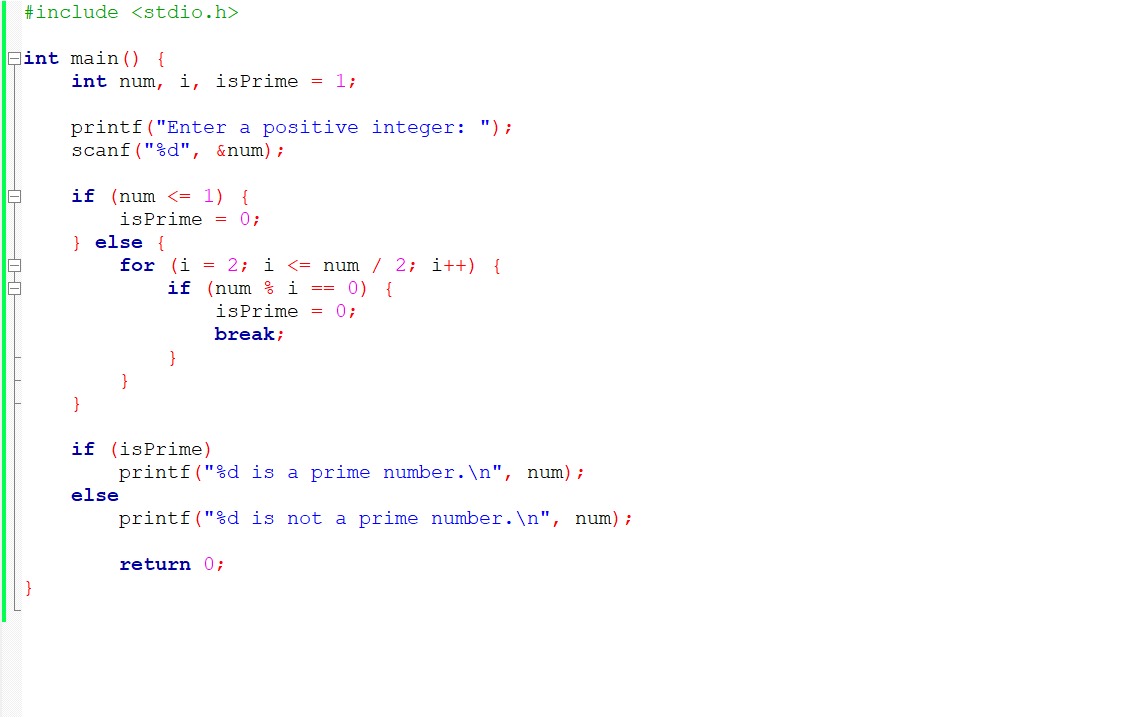
****

**OUTPUT**

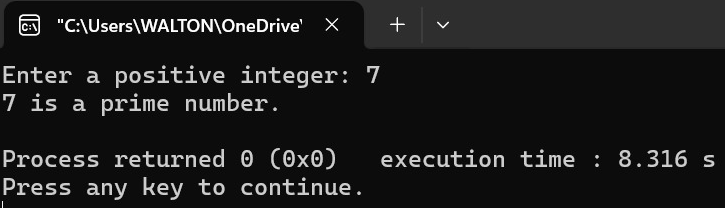
****

***Loop Control Statement (For, Nested For, While, Do-While)***

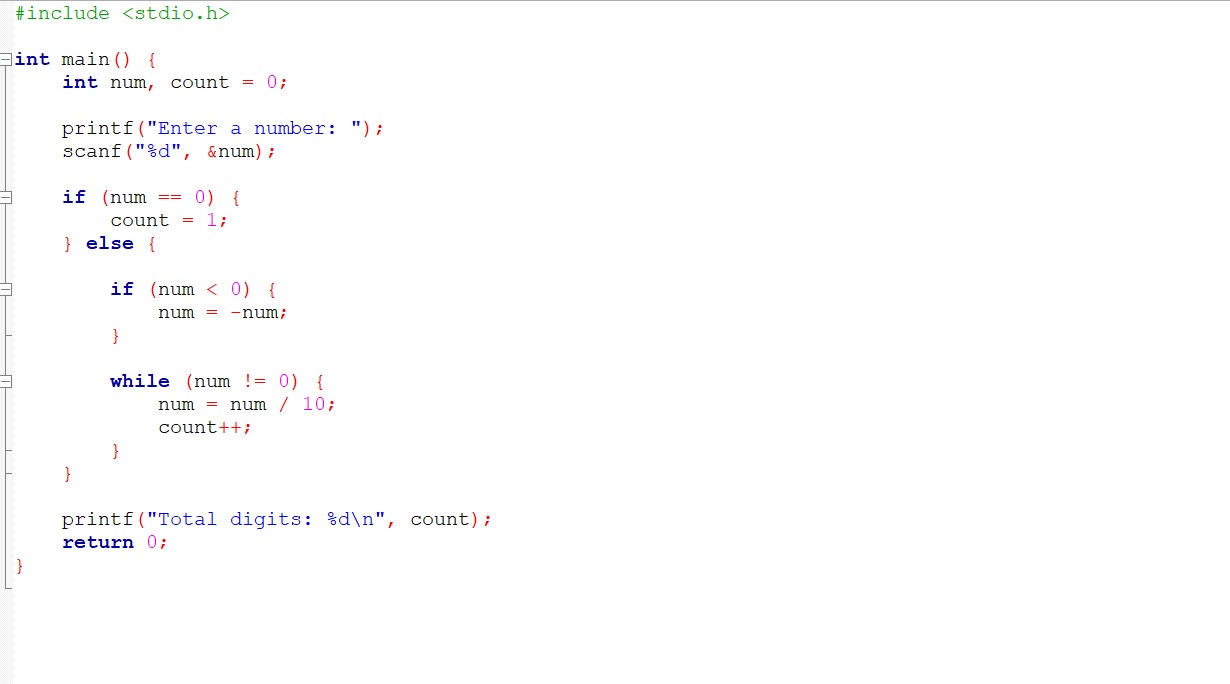
**Write a program in C to check whether a number is prime or not using loop control statements (for, nested for, while, or do-while).**

****

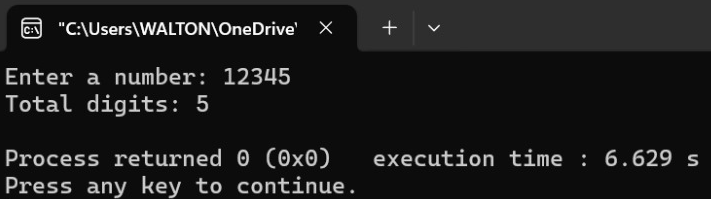
**OUTPUT**

****

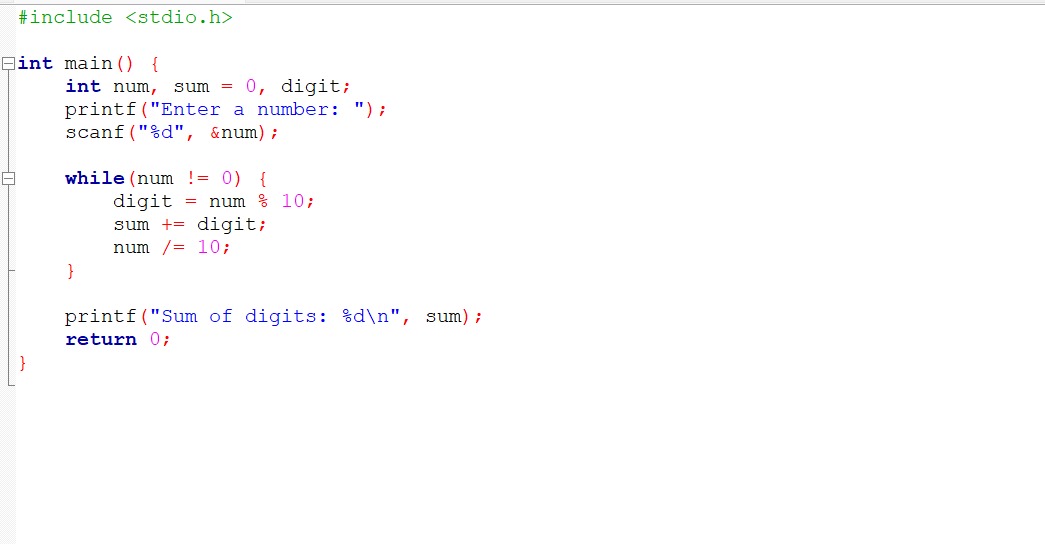
**Write a program in C to count the number of digits in a given number using loop control statements.**

****

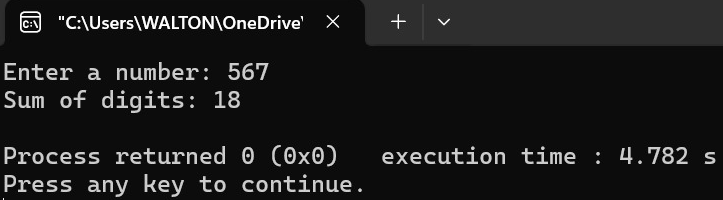
**OUTPUT**

****

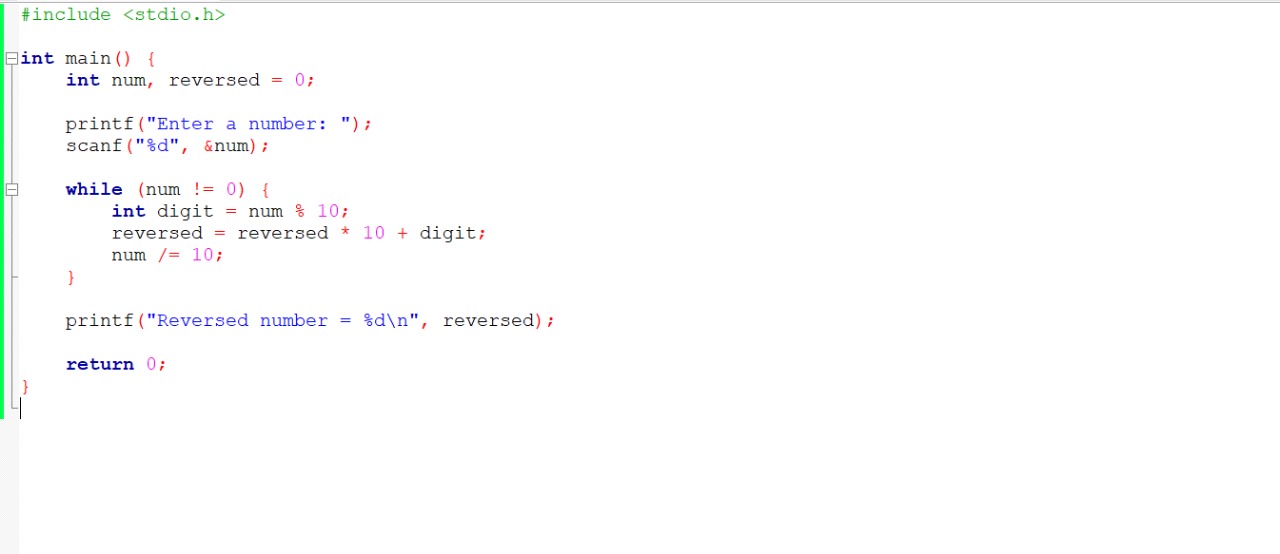
**Write a program in C to find the sum of the digits of a given number using loop control statements.**

****

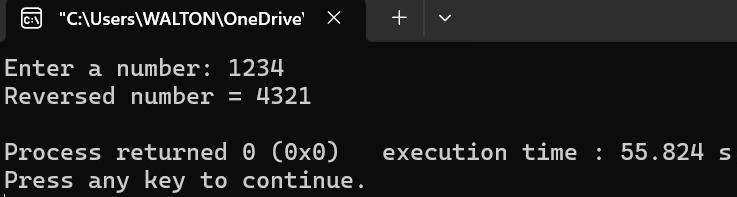
**OUTPUT**

****

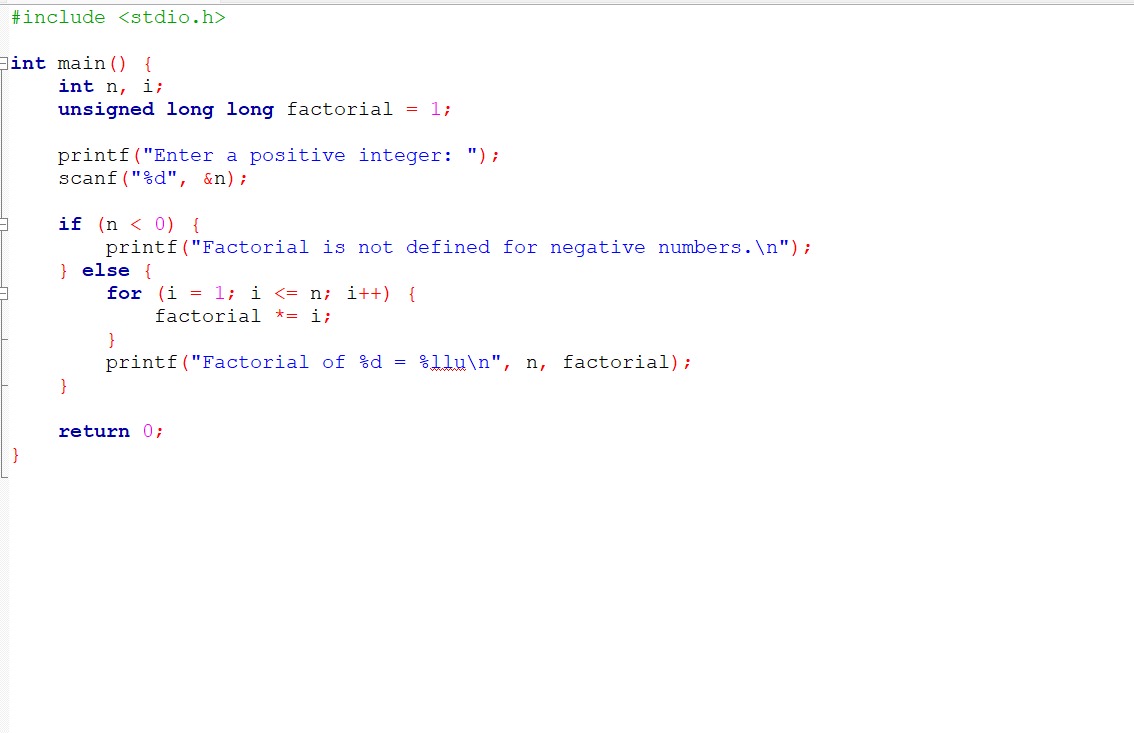
**Write a program in C to reverse a given number using loop control statements.**

****

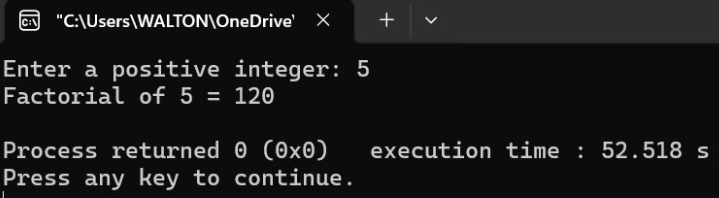
**OUTPUT**

****

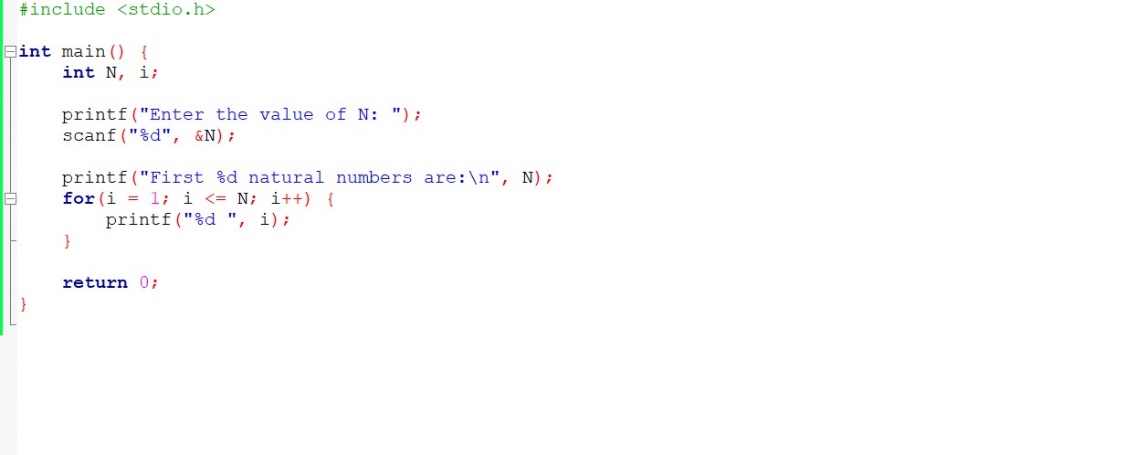
**Write a program in C to find the factorial of a number using loop control statements.**

****

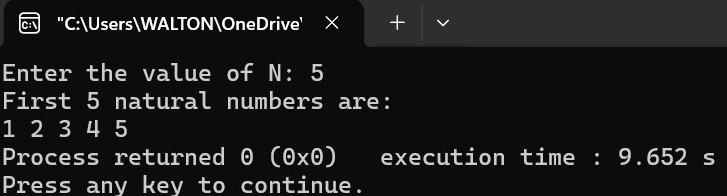
**OUTPUT**

****

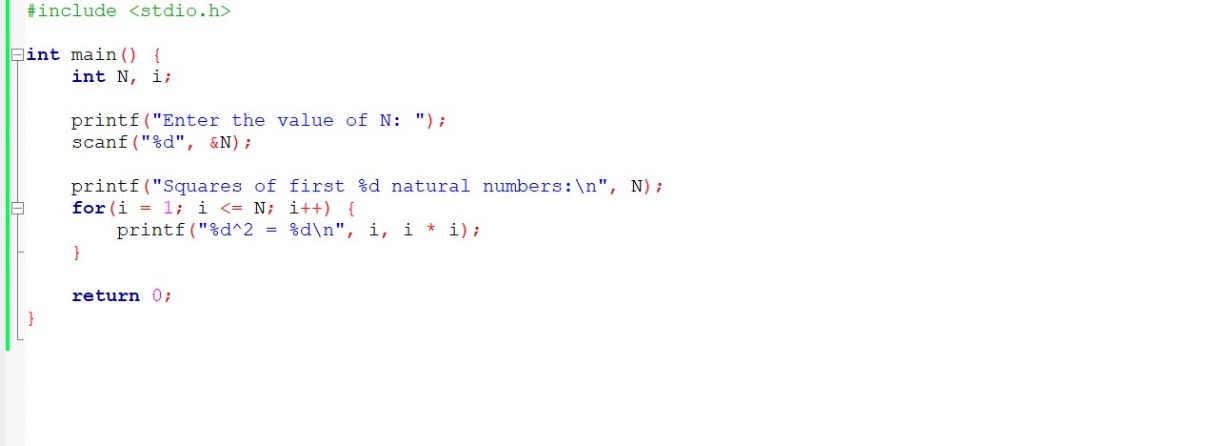
**Write a program in C to print the first N natural numbers using loop control statements.**

****

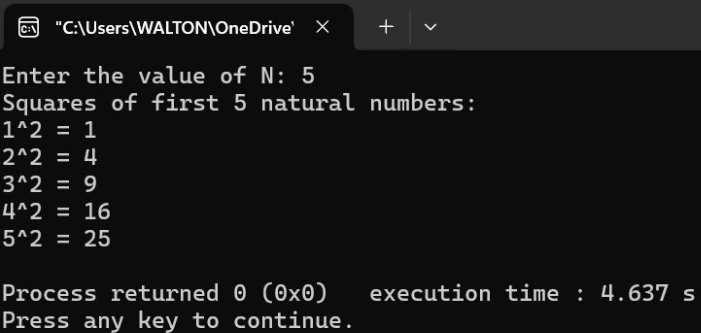
**OUTPUT**

****

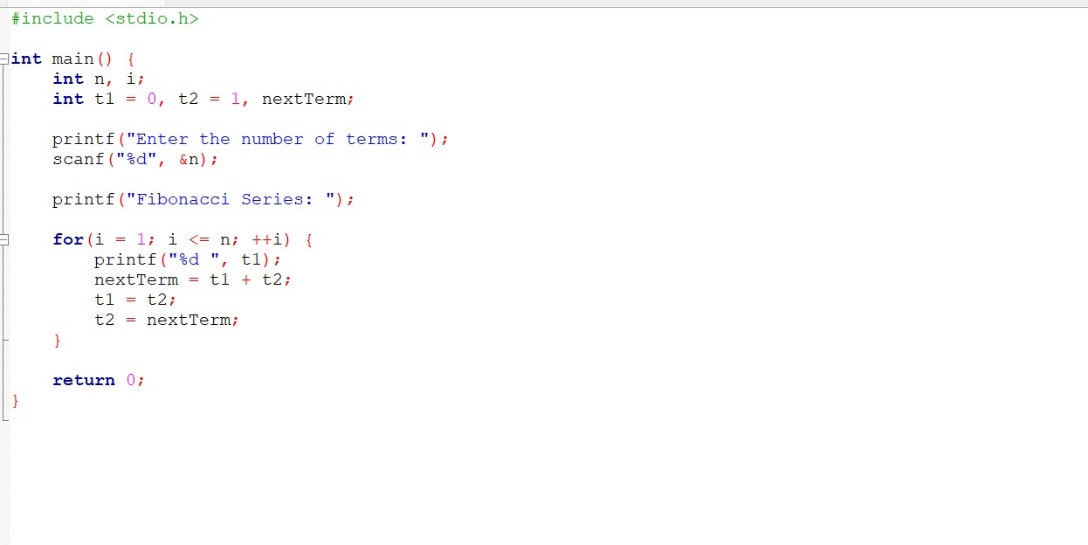
**Write a program in C to print the squares of the first N natural numbers using loop control statements.**

****

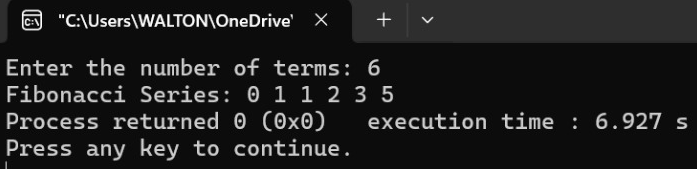
**OUTPUT**

****

**Write a program in C to print the Fibonacci series up to N terms using loop control statements.**

****

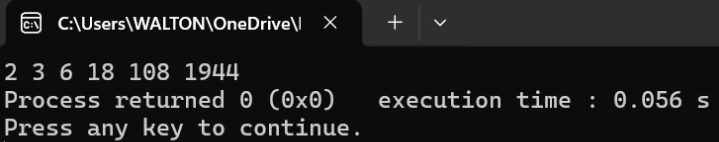
**OUTPUT**

****

**Write a C program to print the series like below using for loop 2 3 6 18 108 1944.... .... ..**

****

**OUTPUT**

****

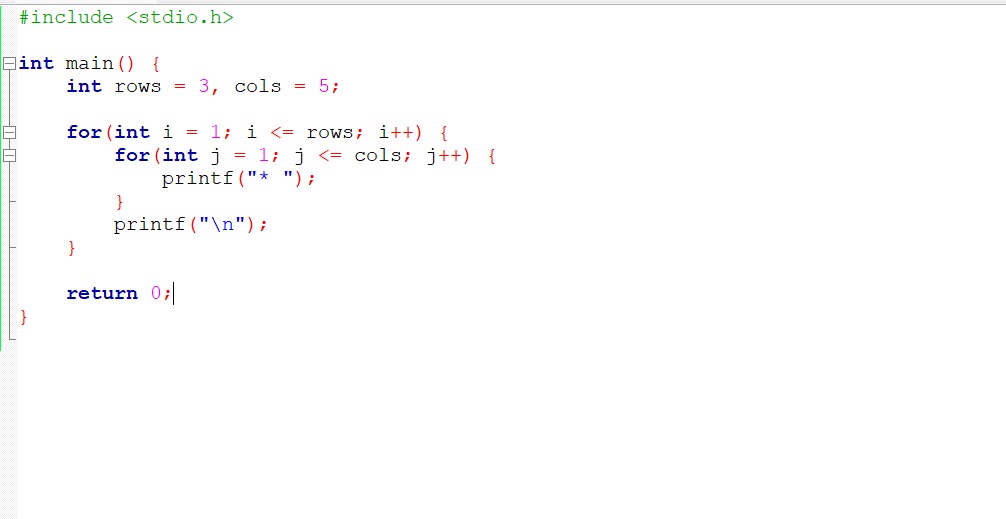
**Rectangle Pattern (3 rows, 5 columns)**

**Output:**

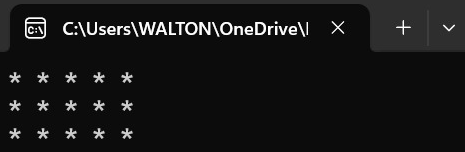
\* \* \* \* \*

\* \* \* \* \*

\* \* \* \* \*



**OUTPUT**

****

**Right-Angled Triangle (Ascending)**

**Output:**

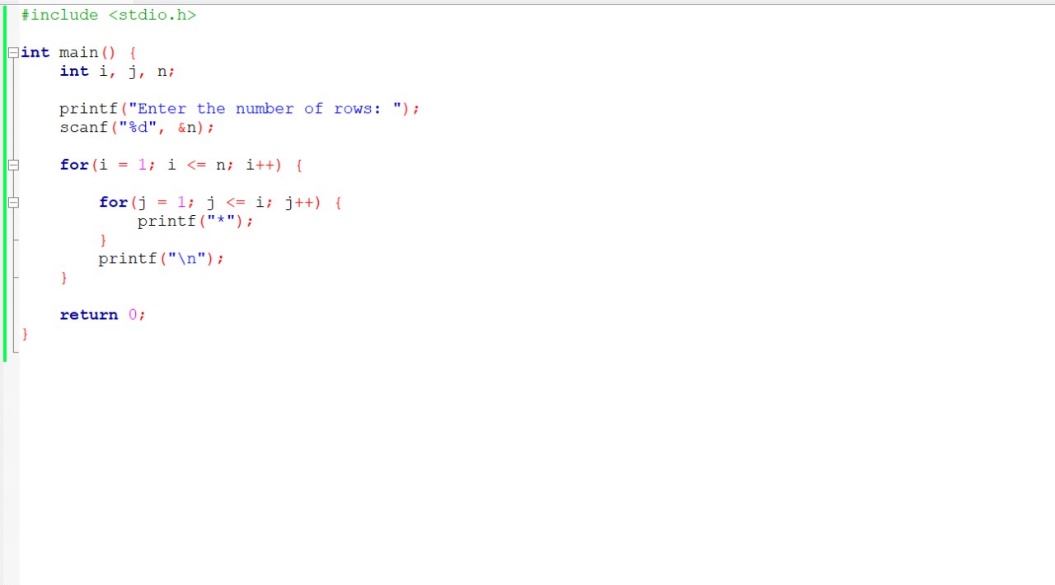
\*

\* \*

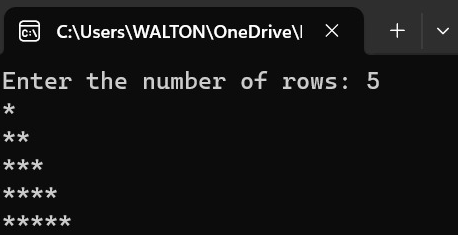
\* \* \*

\* \* \* \*

\* \* \* \* \*



**OUTPUT**

****

**Right-Angled Triangle (Descending)**

**Output:**

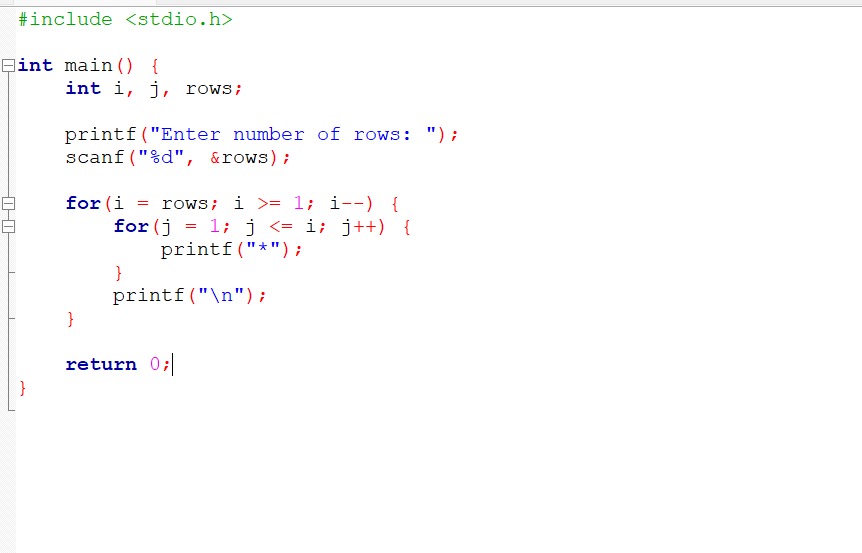
\* \* \* \* \*

\* \* \* \*

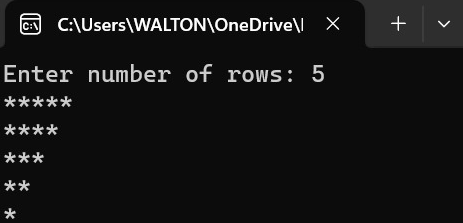
\* \* \*

\* \*

\*



**OUTPUT**

****

**Pascal's Triangle**

**Output:**

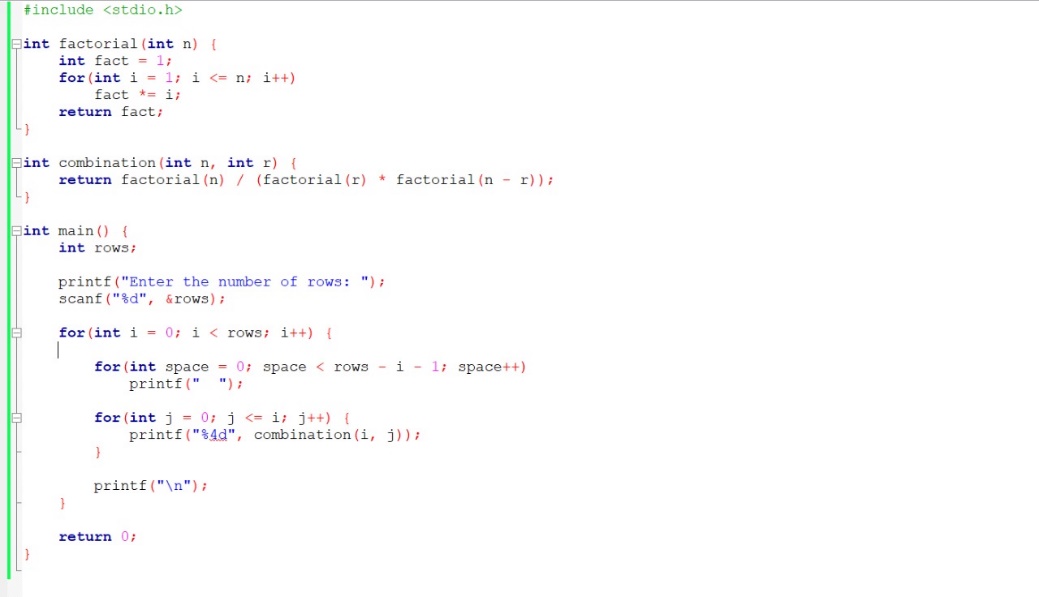
1

1. 1

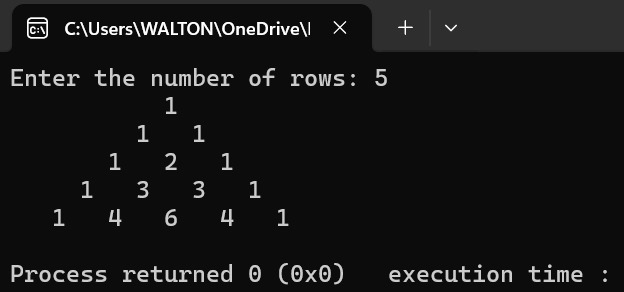
1 2 1

1 3 3 1

1 4 6 4 1



**OUTPUT**

****

**Alphabet Triangle**

**Output:**

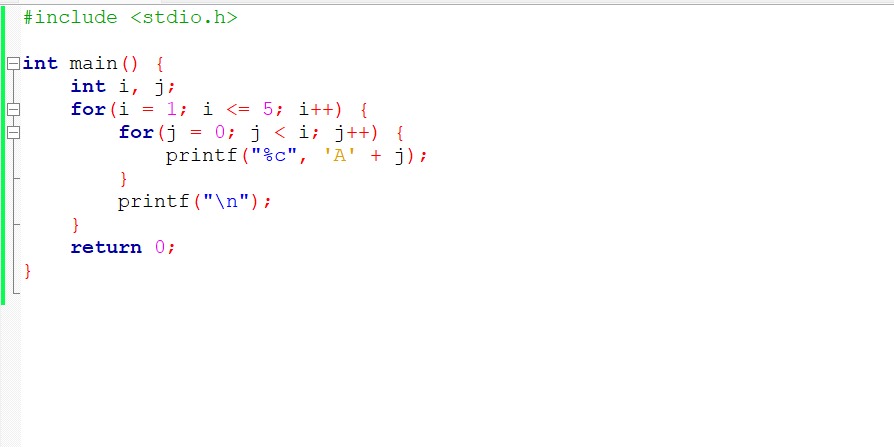
**A**

**AB**

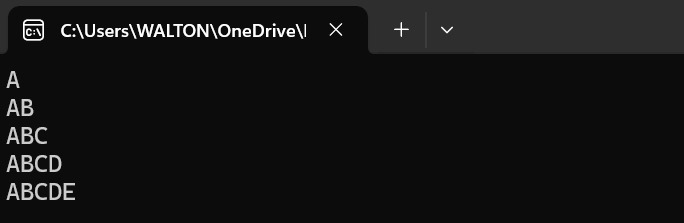
**ABC**

**ABCD**

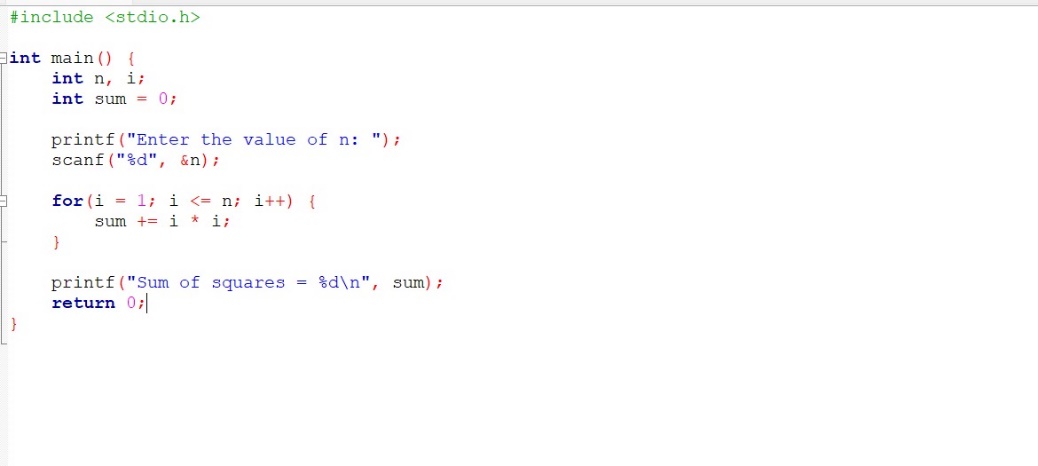
**ABCDE**

****

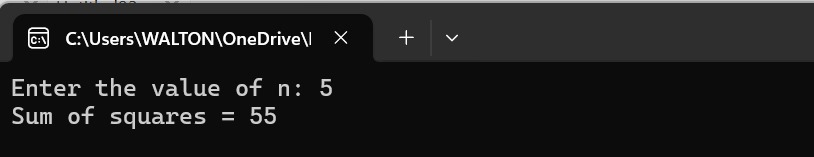
**OUTPUT**

****

**Write a program in C to find the sum of squares Sum of Squares: 1+2+3+...+n² using a loop.**

****

**OUTPUT**

****

**Write a program in C to print a diamond pattern using for, while, and do-while loops.**

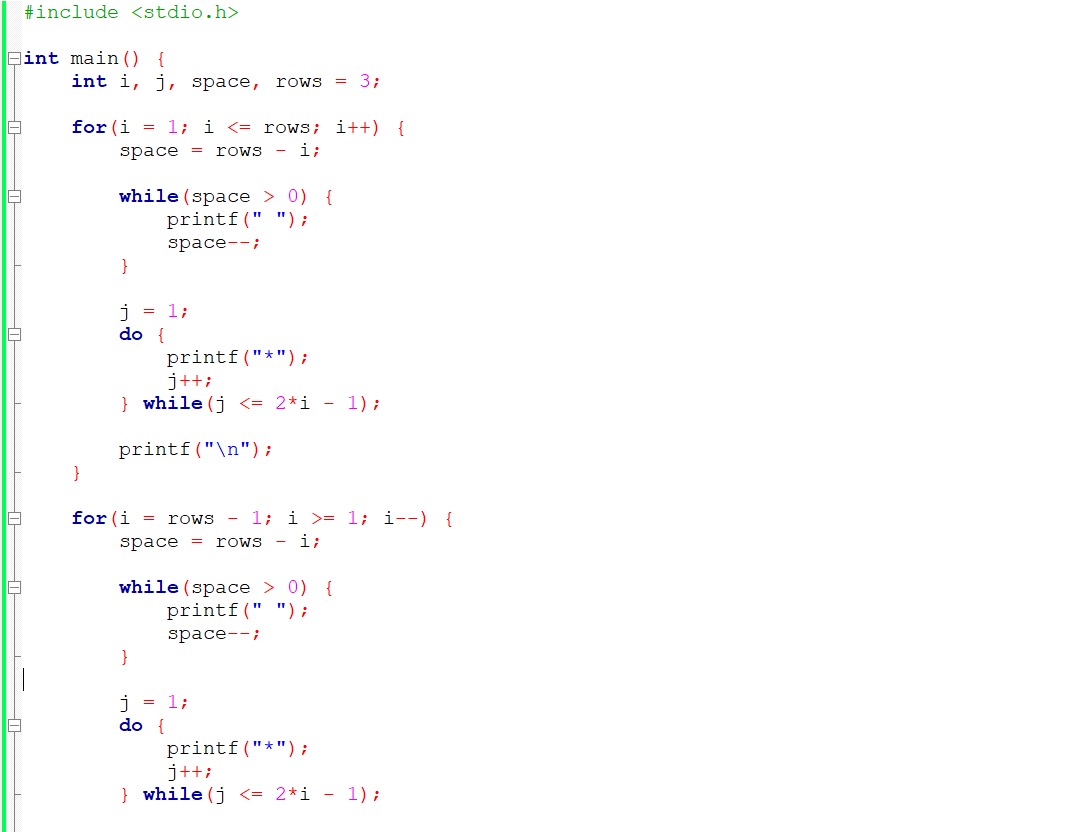
**\***

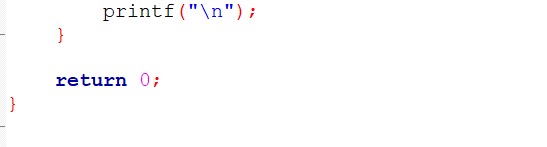
**\* \* \***

**\* \* \* \* \***

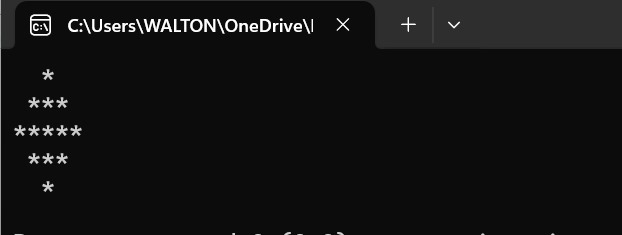
**\* \* \***

**\***

****

****

**OUTPUT**

****

**Write a program in C to print a heart shape pattern using loop control statements**

**\* \***

**\* \* \* \* \* \***

**\* \* \* \* \* \* \* \* \* \***

**\* \* \* \* \* \* \* \* \* \***

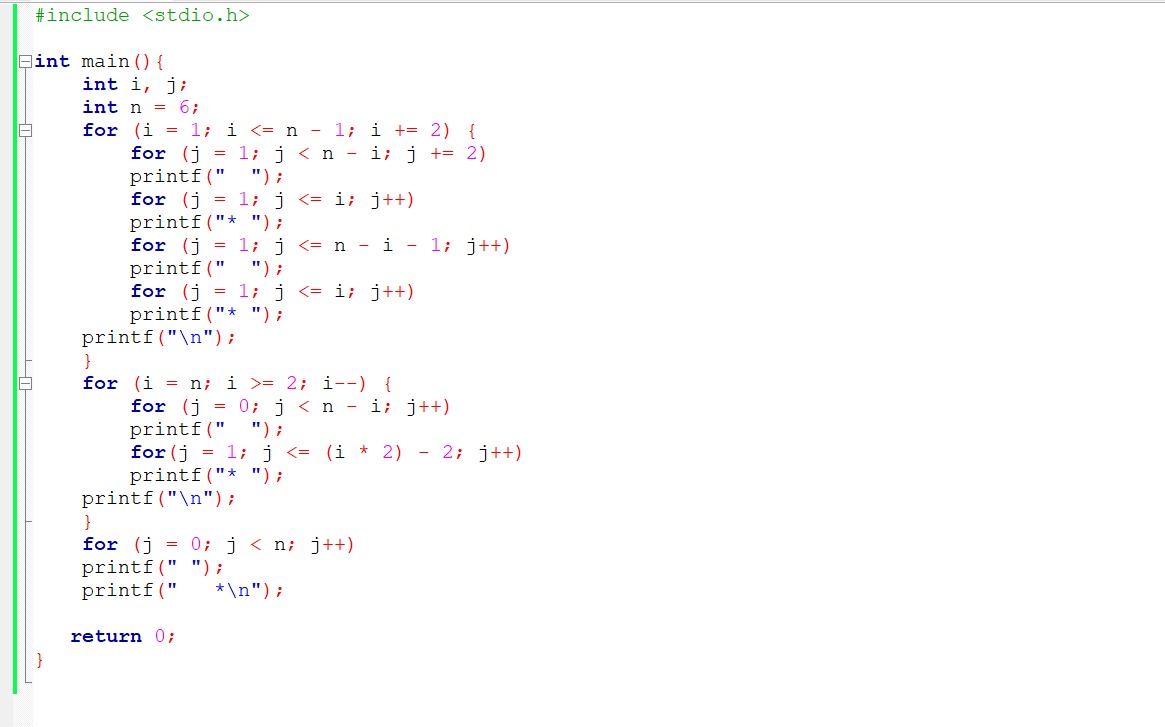
**\* \* \* \* \* \* \* \***

**\* \* \* \* \* \***

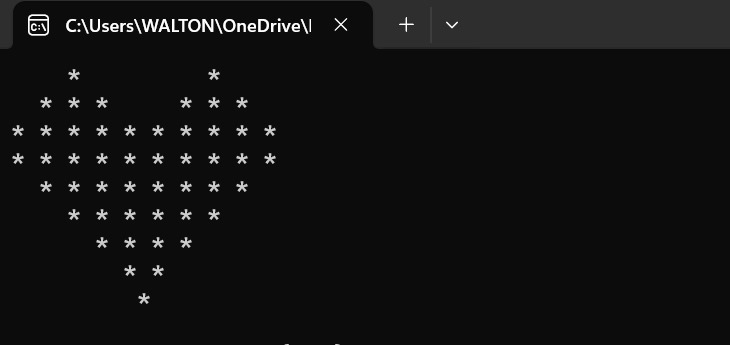
**\* \* \* \***

**\* \***

**\***

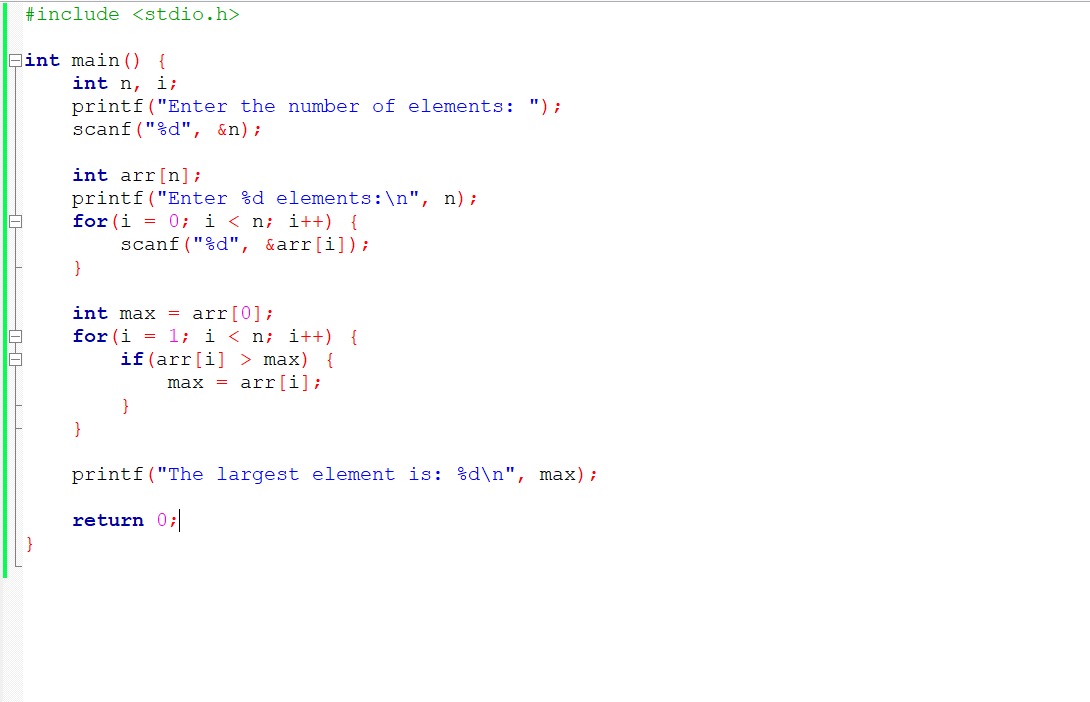
****

**OUTPUT**

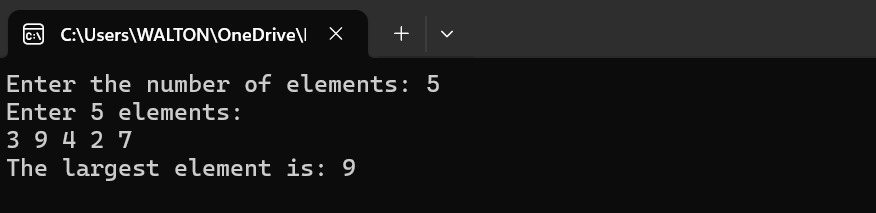
****

***ARRAY***

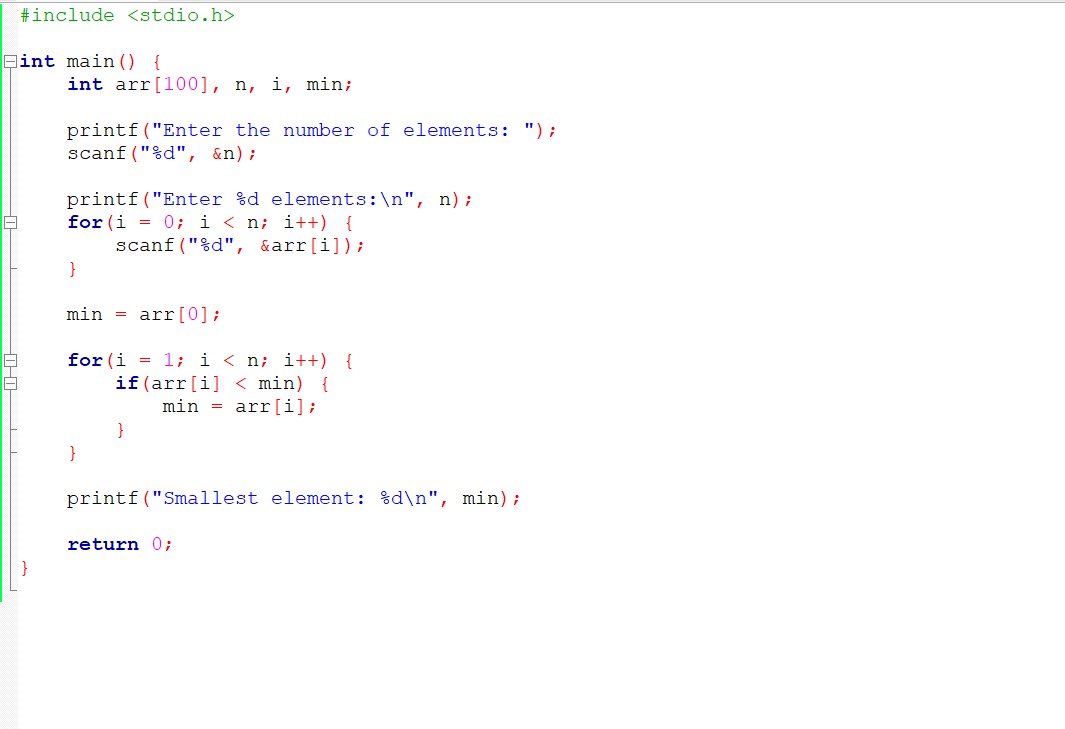
**Write a program in C to find the largest element in an array**

****

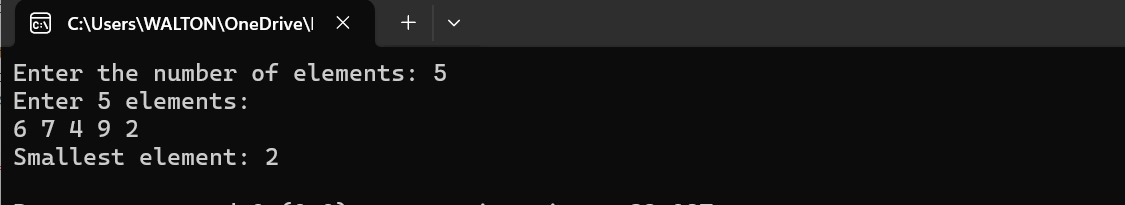
**OUTPUT**

****

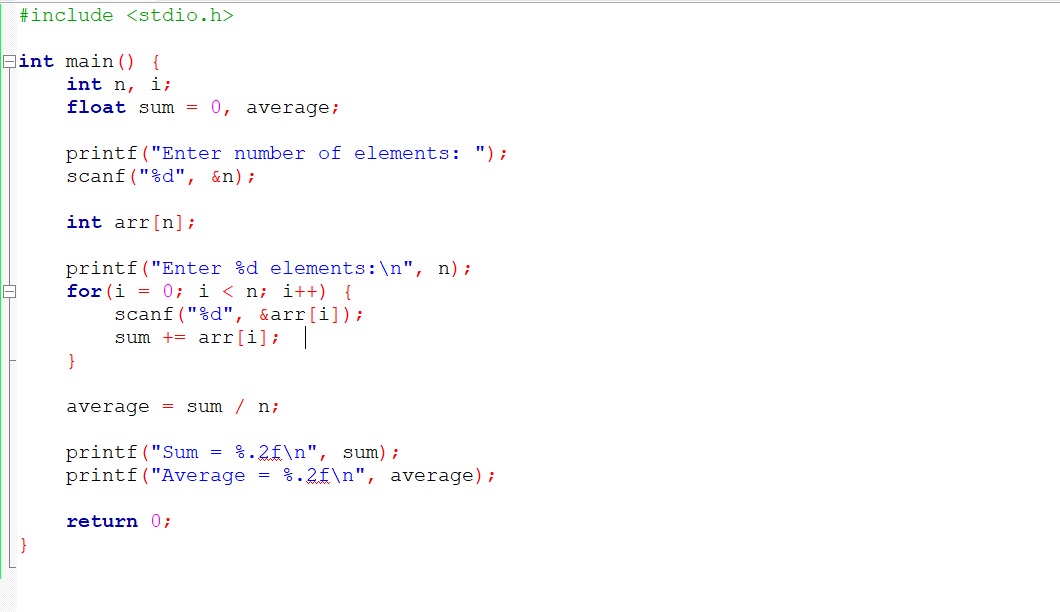
**Write a program in C to find the smallest element in an array**

****

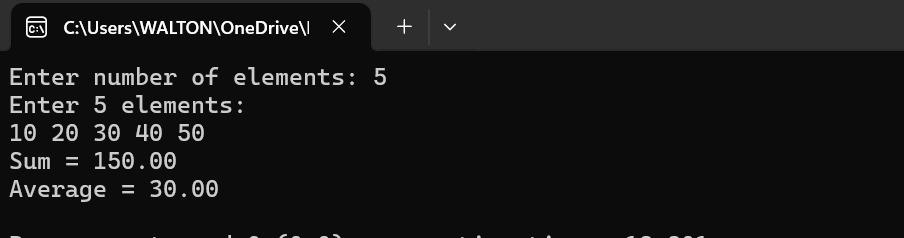
**OUTPUT**

****

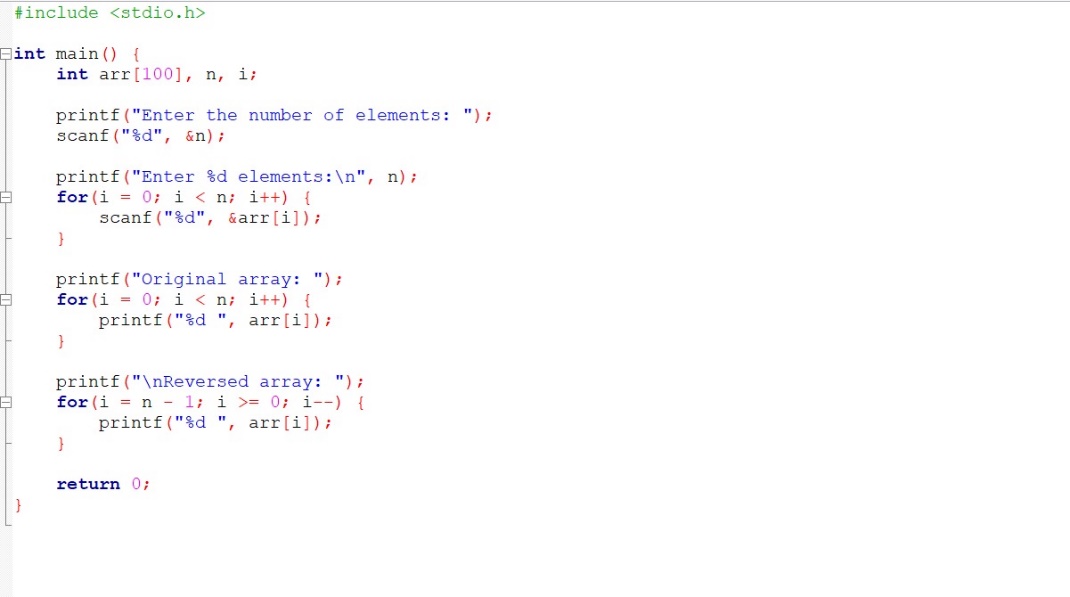
**Write a program in C to calculate sum and average of array elements**

****

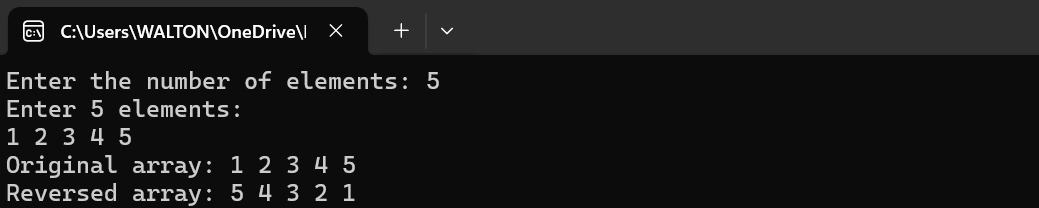
**OUTPUT**

****

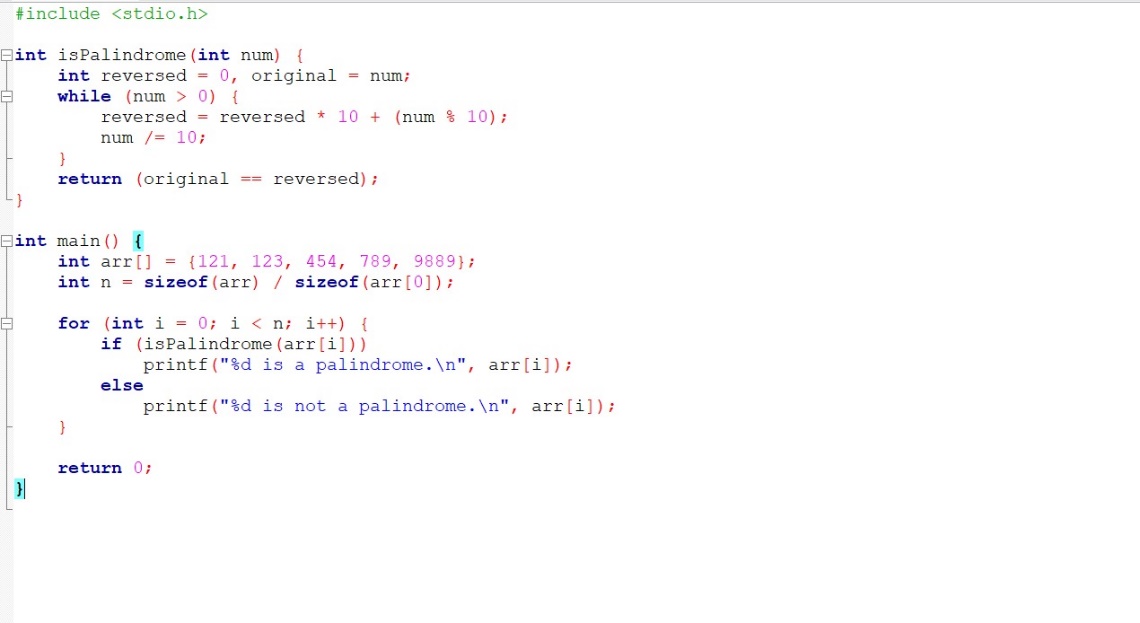
**Write a program in C to reverse the elements of an array**

****

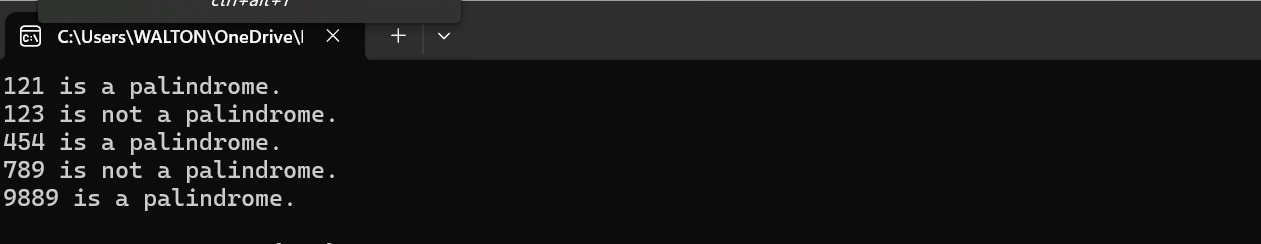
**OUTPUT**

****

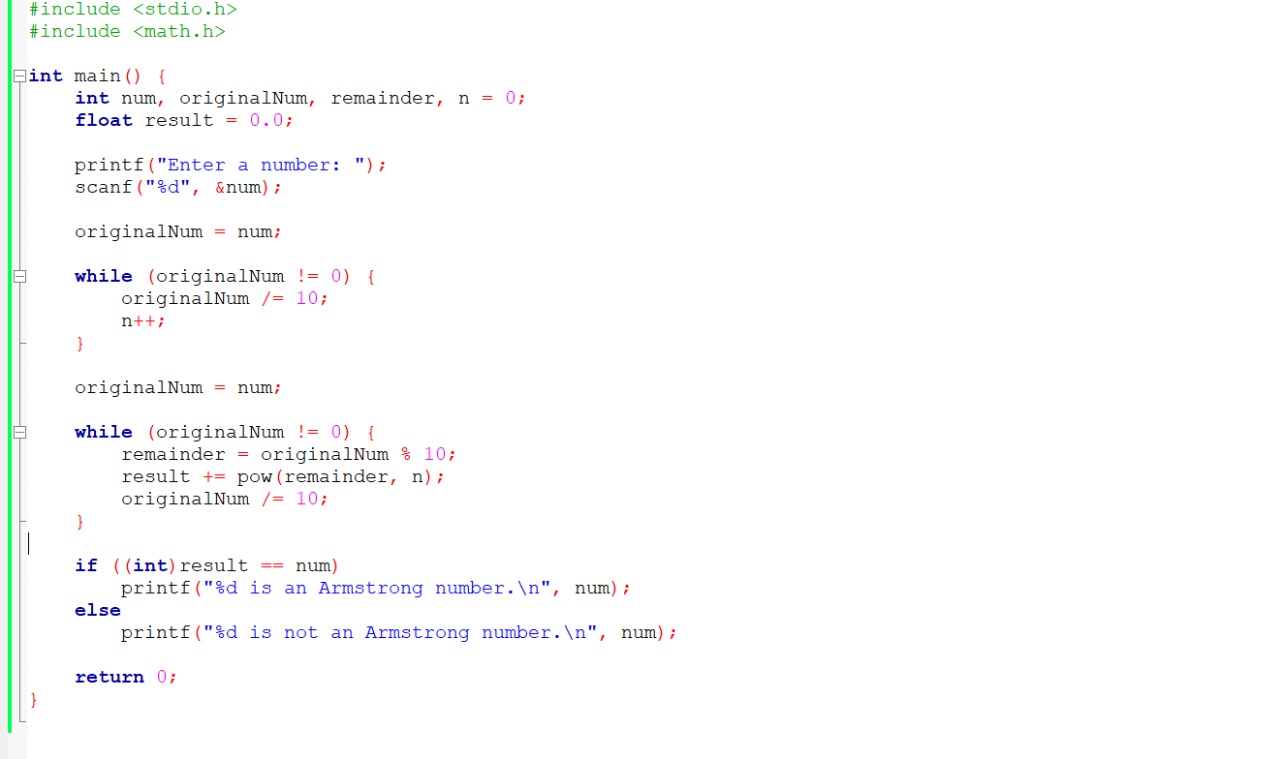
**Write a program in C to check whether a given number is a palindrome or not**

****

**OUTPUT**

****

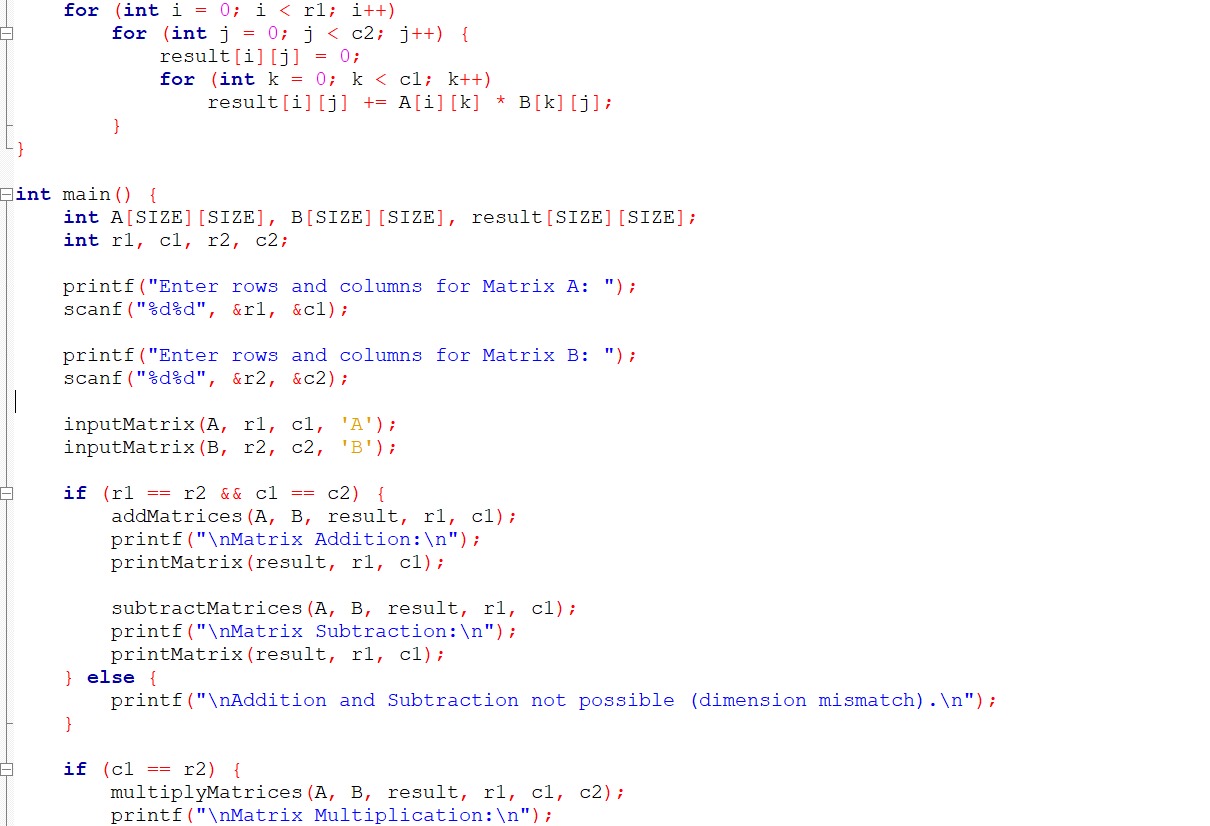
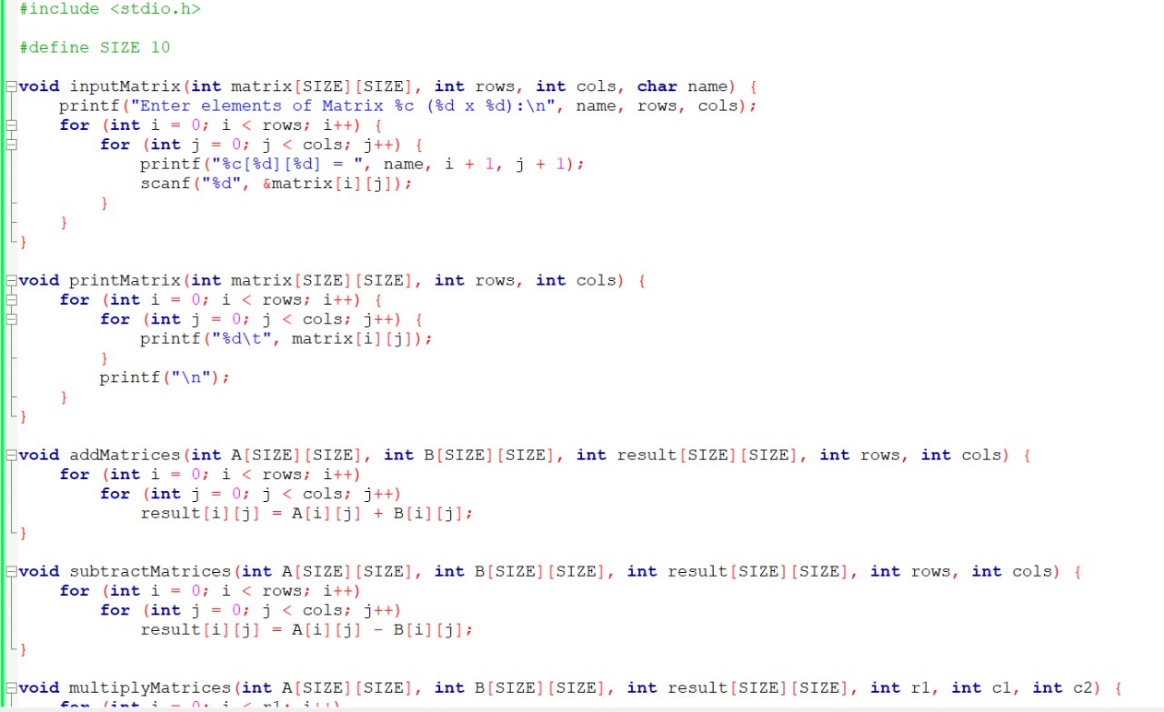
**Write a program in C to check whether a given number is an Armstrong number (153 = 1³ + 5³ + 3³)**

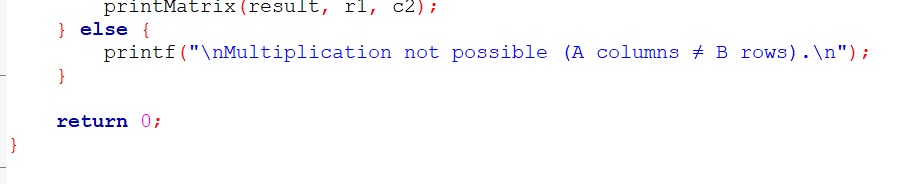
****

**OUTPUT**

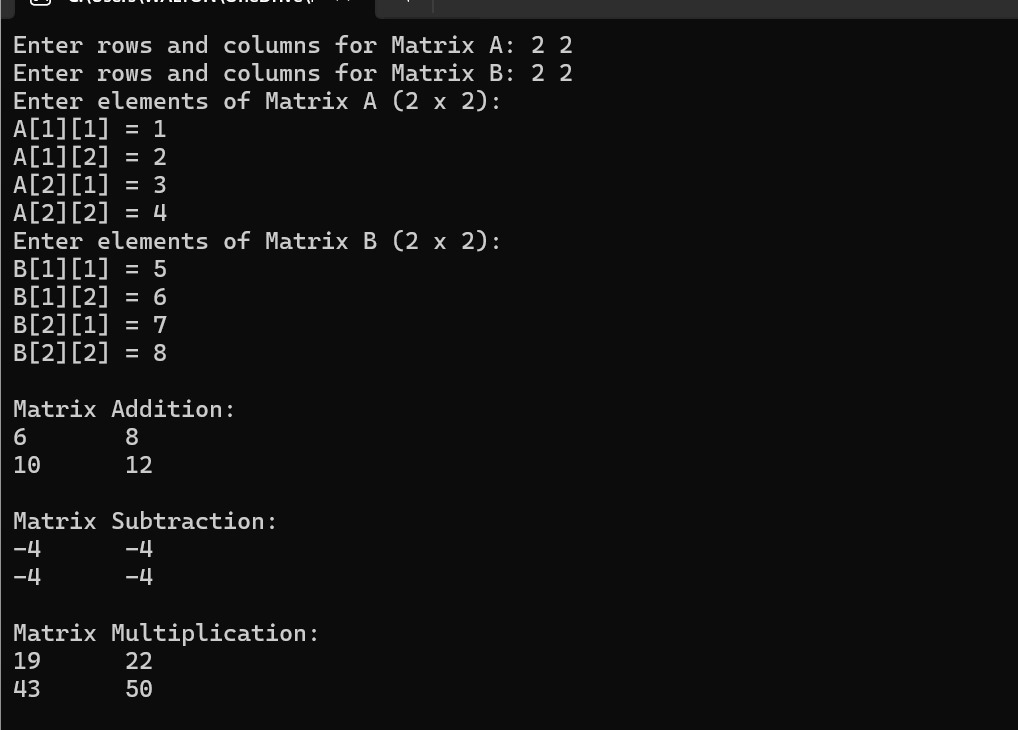
****

**Write a program in C to perform matrix addition, subtraction, and multiplication using arrays.**

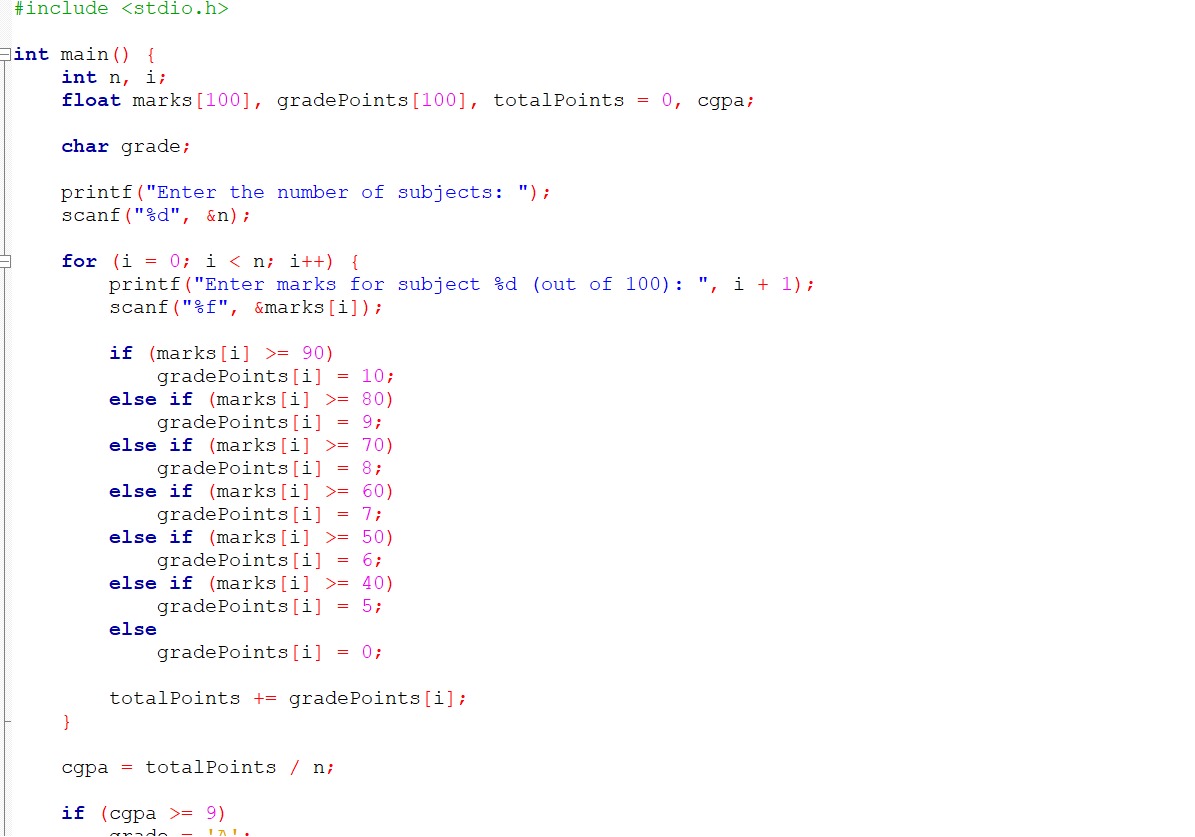
****

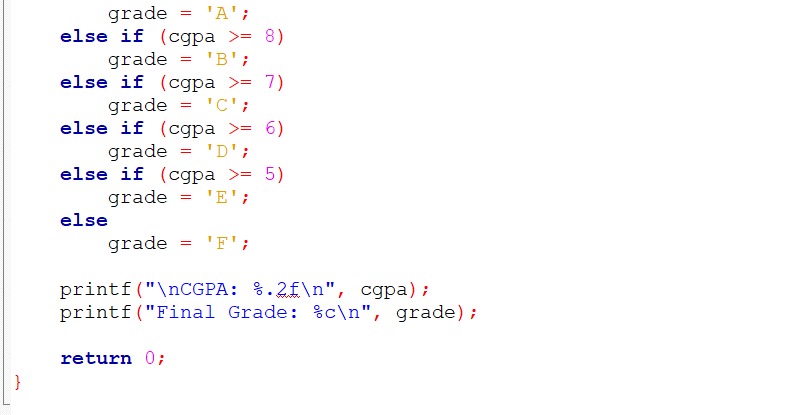
****

**OUTPUT**

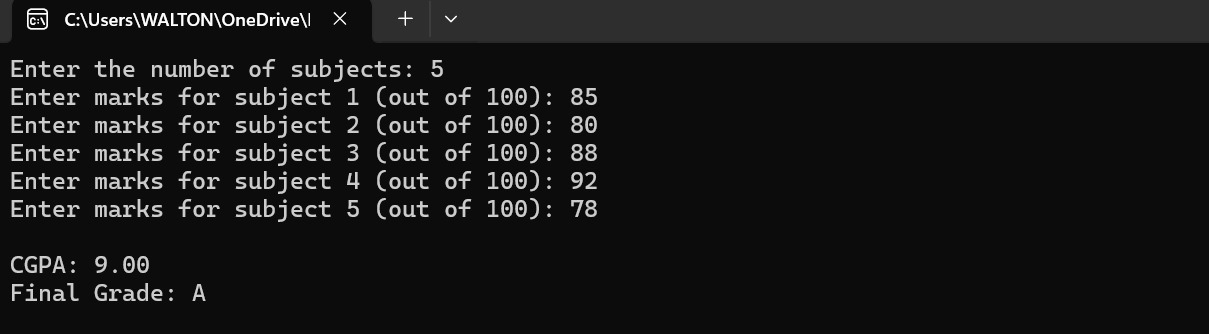
****

**Write a program in C to calculate CGPA and grade using arrays.**

****

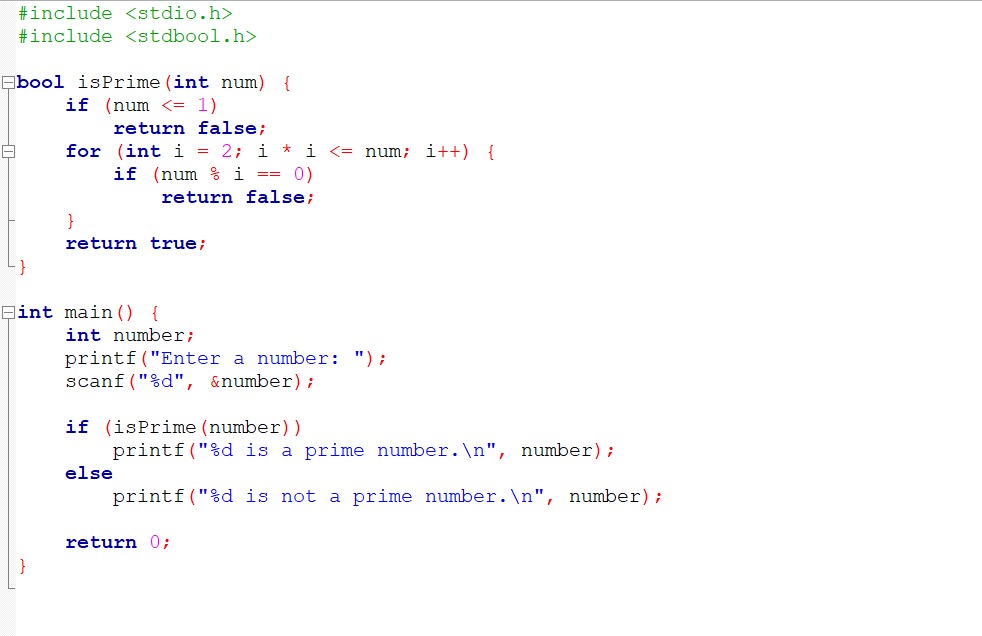
****

**OUTPUT**

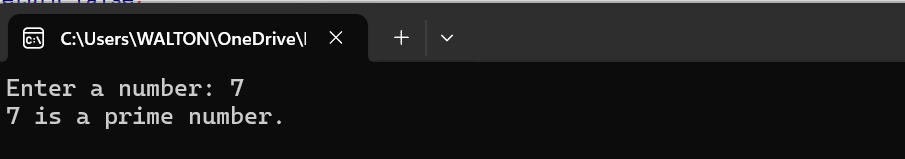
****

***Function***

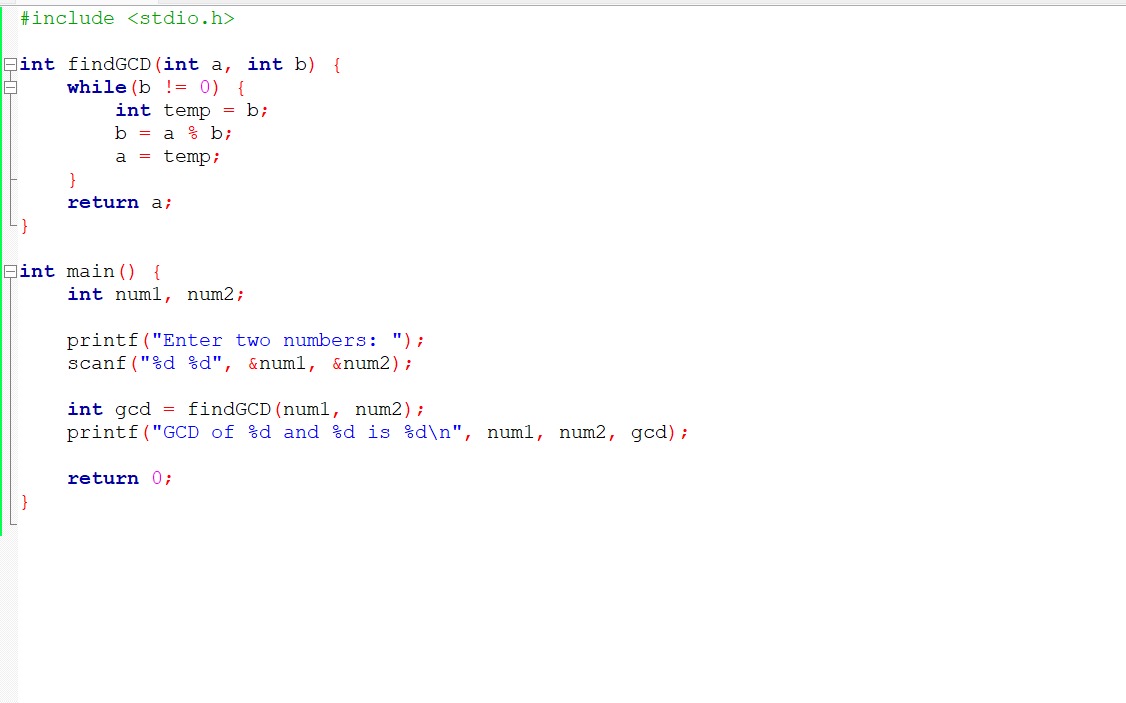
**Write a function to check if a number is prime**

****

**OUTPUT**

****

**Write a function to find the GCD of two numbers**

****

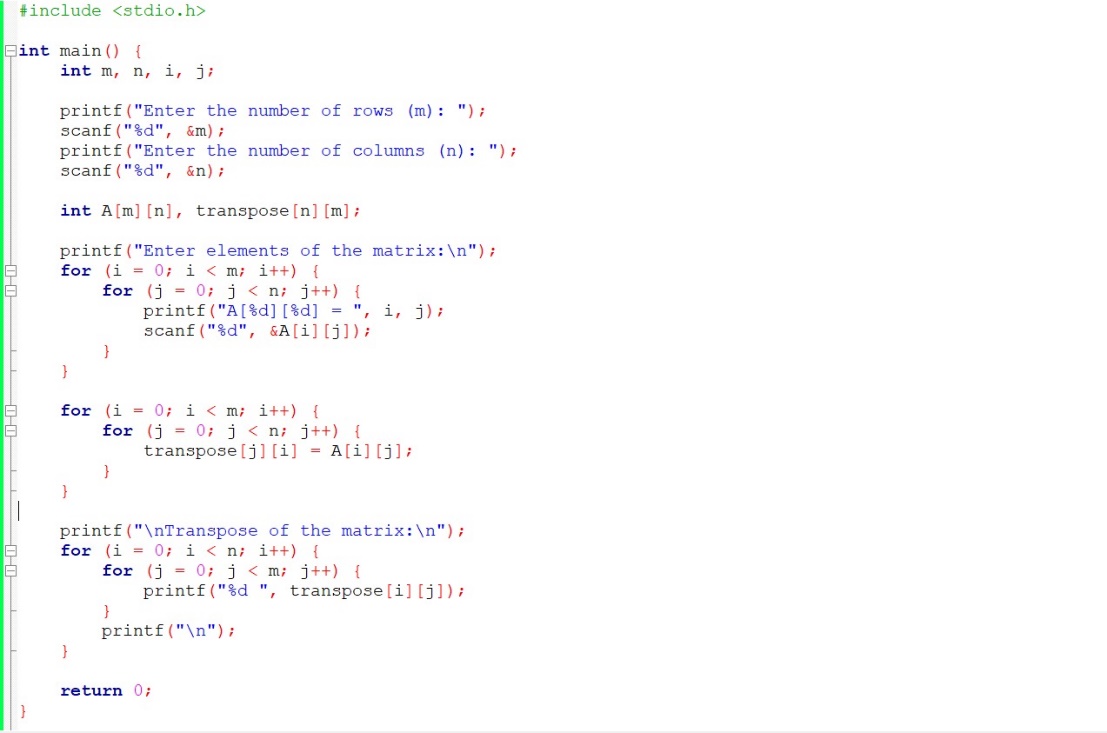
**OUTPUT**

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* **What is Transpose Matrix?**

The transpose of a matrix means converting its rows into columns and columns into rows.

**Write a function in C to find the transpose of a matrix**



**OUTPUT**

