



# LEADING UNIVERSITY

## Assignment-1

Course Code: CSE-1212

Course Title: Structural Programming Sessional

DEPARTMENT OF CSE LU 50<sup>th</sup> BATCH

FALL - 2023

### SUBMITTED TO:

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Section: F

Submission Date: 12.02.2023

## **Problem-1**

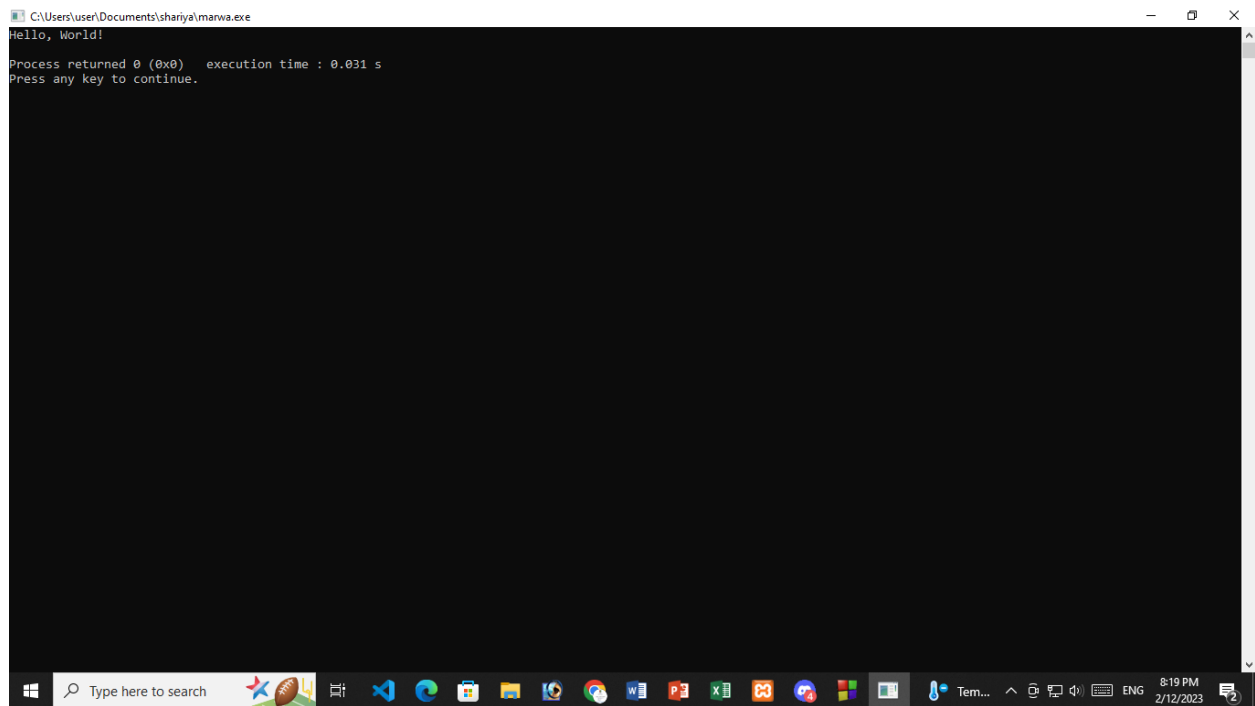
**"Hello, World!" program in C:**

### **Code:**

```
#include <stdio.h>

int main() {
    printf("Hello, World!\n");
    return 0;
}
```

### **Output**

A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\user\Documents\shariya\marwa.exe". The window content displays the output of a C program: "Hello, World!" followed by "Process returned 0 (0x0) execution time : 0.031 s" and "Press any key to continue." The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 8:19 PM on 2/12/2023.

```
C:\Users\user\Documents\shariya\marwa.exe
Hello, World!
Process returned 0 (0x0)   execution time : 0.031 s
Press any key to continue.
```

## **Problem-2**

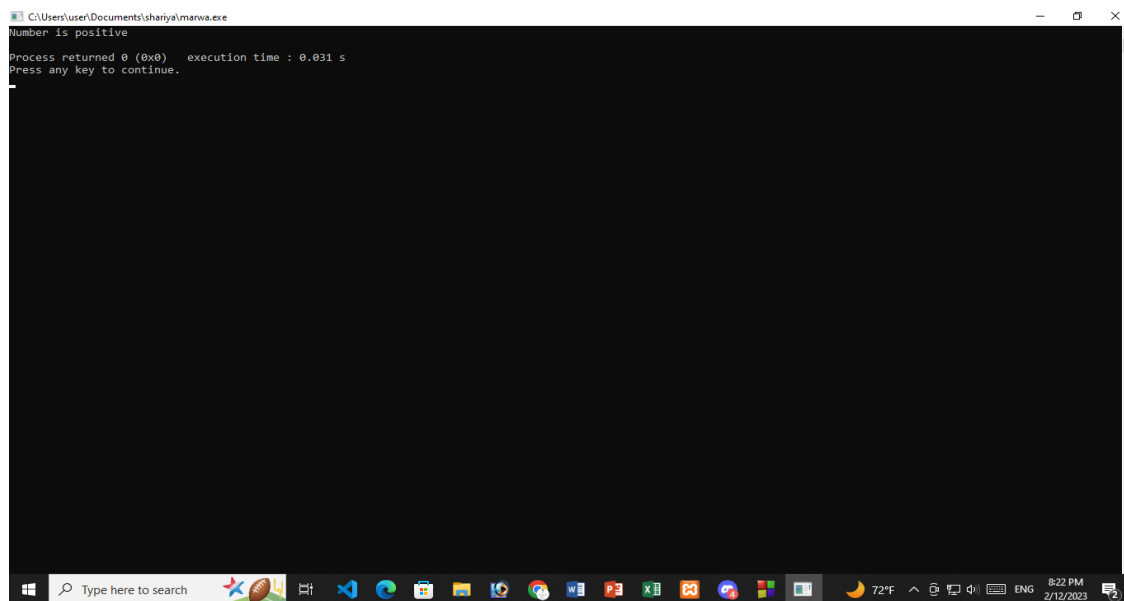
**if statement in C:**

### **Code:**

```
#include <stdio.h>

int main() {
    int number = 10;
    if (number > 0) {
        printf("Number is positive\n");
    }
    return 0;
}
```

### **Output:**

A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\user\Documents\shariya\marwa.exe". The window content displays the output of the program: "Number is positive". Below this, it shows "Process returned 0 (0x0) execution time : 0.031 s" and "Press any key to continue.". The Windows taskbar is visible at the bottom, showing the search bar, task view button, and various application icons. The system tray on the right shows the temperature as 72°F, the time as 8:22 PM, and the date as 2/12/2023.

## **Problem-3**

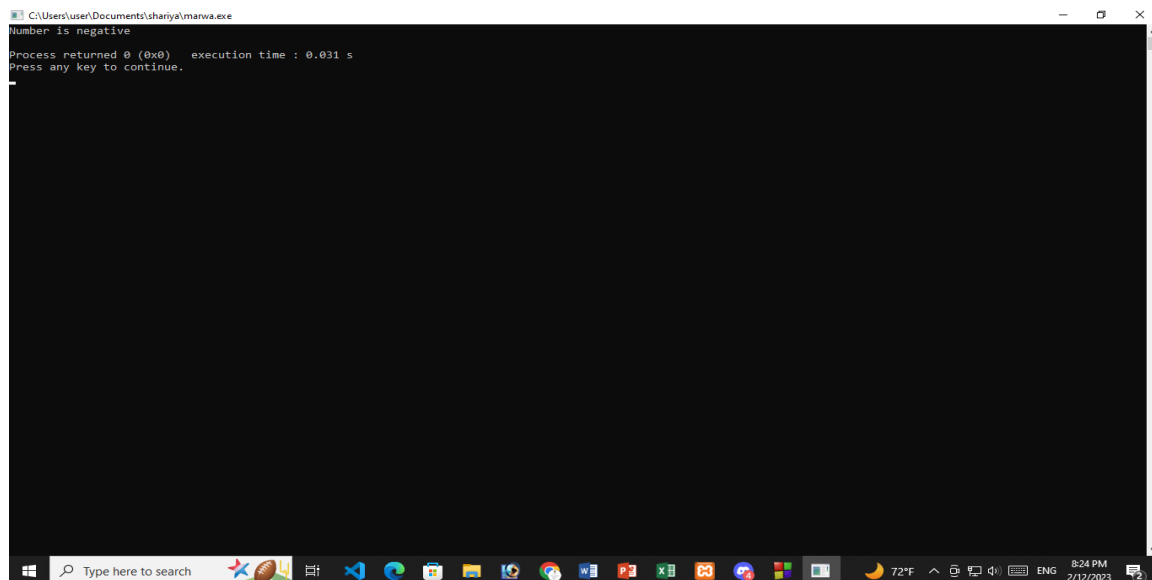
### **if-else statement in C:**

#### **Code:**

```
#include <stdio.h>

int main() {
    int number = -10;
    if (number > 0) {
        printf("Number is positive\n");
    } else {
        printf("Number is negative\n");
    }
    return 0;
}
```

#### **Output:**

A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\user\Documents\shariya\manva.exe". The window content displays the output of the C program: "Number is negative". Below this, it shows "Process returned 0 (0x0) execution time : 0.031 s" and "Press any key to continue.". The Windows taskbar is visible at the bottom, showing the search bar, task view button, and various application icons. The system tray on the right shows the temperature as 72°F, the date and time as 8:24 PM on 2/12/2023, and the language set to ENG.

## **Problem-4**

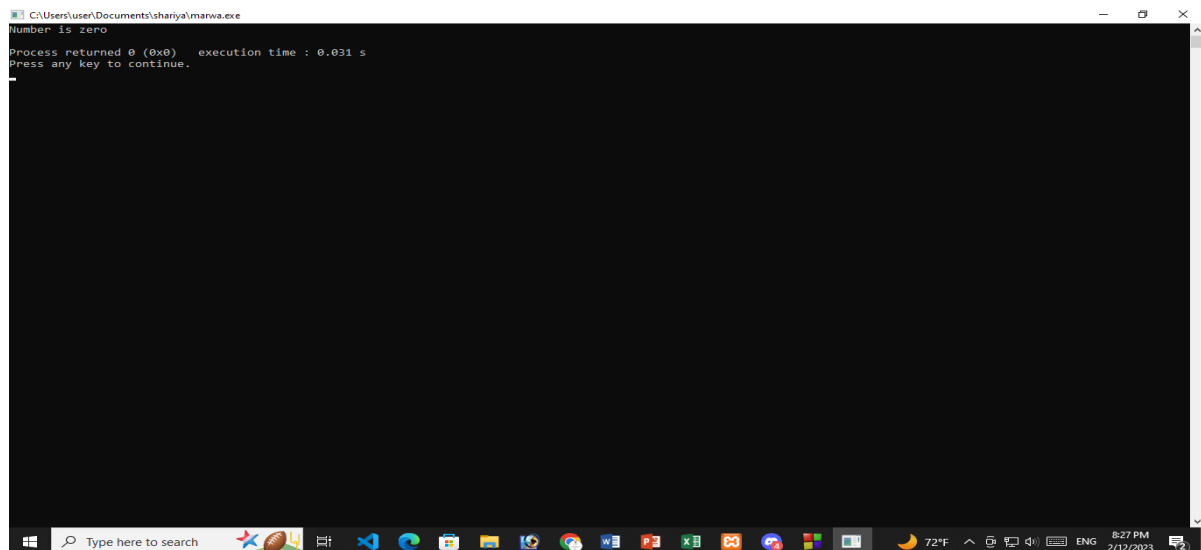
**nested if-else statement in C:**

### **Code:**

```
#include <stdio.h>

int main() {
    int number = 0;
    if (number > 0) {
        printf("Number is positive\n");
    } else if (number == 0) {
        printf("Number is zero\n");
    } else {
        printf("Number is negative\n");
    }
    return 0;
}
```

### **Output**



The screenshot shows a Windows command prompt window titled "C:\Users\user\Documents\shariya\marwa.exe". The output of the program is "Number is zero". Below the output, it says "Process returned 0 (0x0) execution time : 0.031 s" and "Press any key to continue.". The window is running on a Windows 10 desktop, with the taskbar visible at the bottom showing various application icons and the system clock indicating 8:27 PM on 2/12/2023.

## **Problem-5**

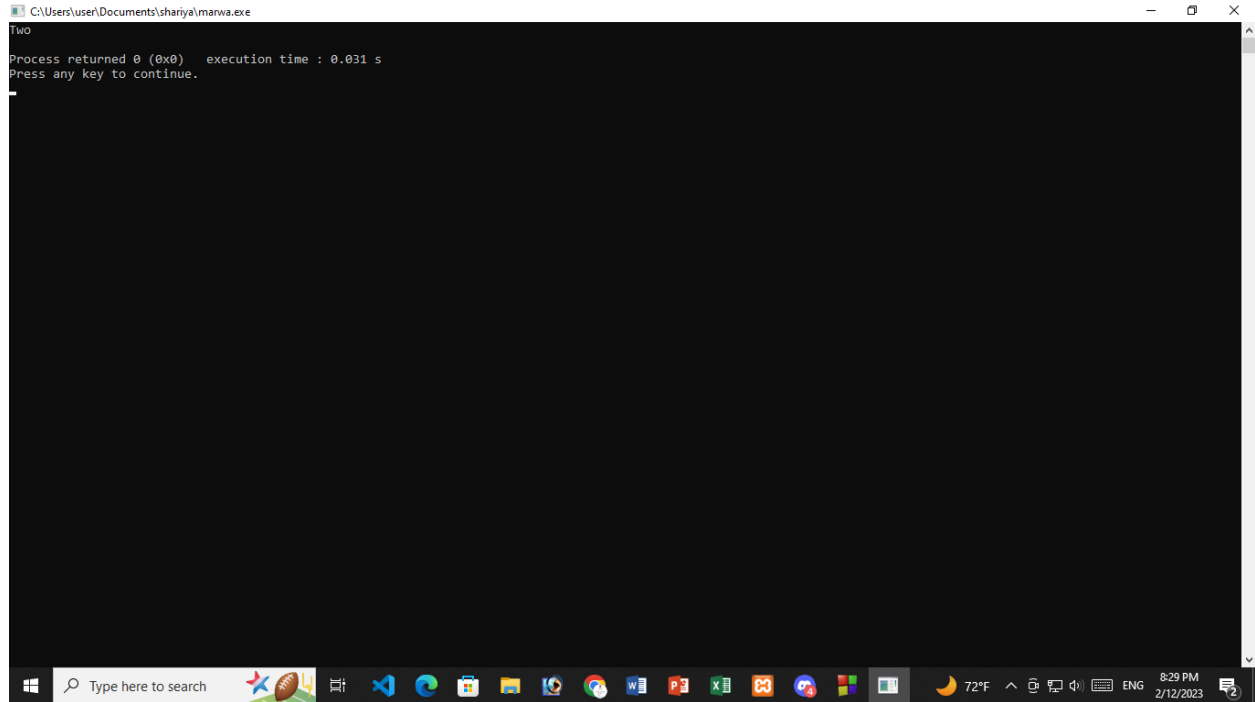
### **switch statement in C:**

#### **Code:**

```
#include <stdio.h>

int main() {
    int number = 2;
    switch (number) {
        case 1:
            printf("One\n");
            break;
        case 2:
            printf("Two\n");
            break;
        case 3:
            printf("Three\n");
            break;
        default:
            printf("Other\n");
    }
    return 0;
}
```

## Output:



A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\user\Documents\shariya\marwa.exe". The window content displays the following text: "Two", "Process returned 0 (0x0) execution time : 0.031 s", and "Press any key to continue.". A cursor is visible on the line "Press any key to continue.". The Windows taskbar is visible at the bottom, showing the search bar, task view button, and several application icons. The system tray on the right shows the date and time as "8:29 PM 2/12/2023" and the language as "ENG".

```
C:\Users\user\Documents\shariya\marwa.exe
Two
Process returned 0 (0x0) execution time : 0.031 s
Press any key to continue.
```

## **Problem-6**

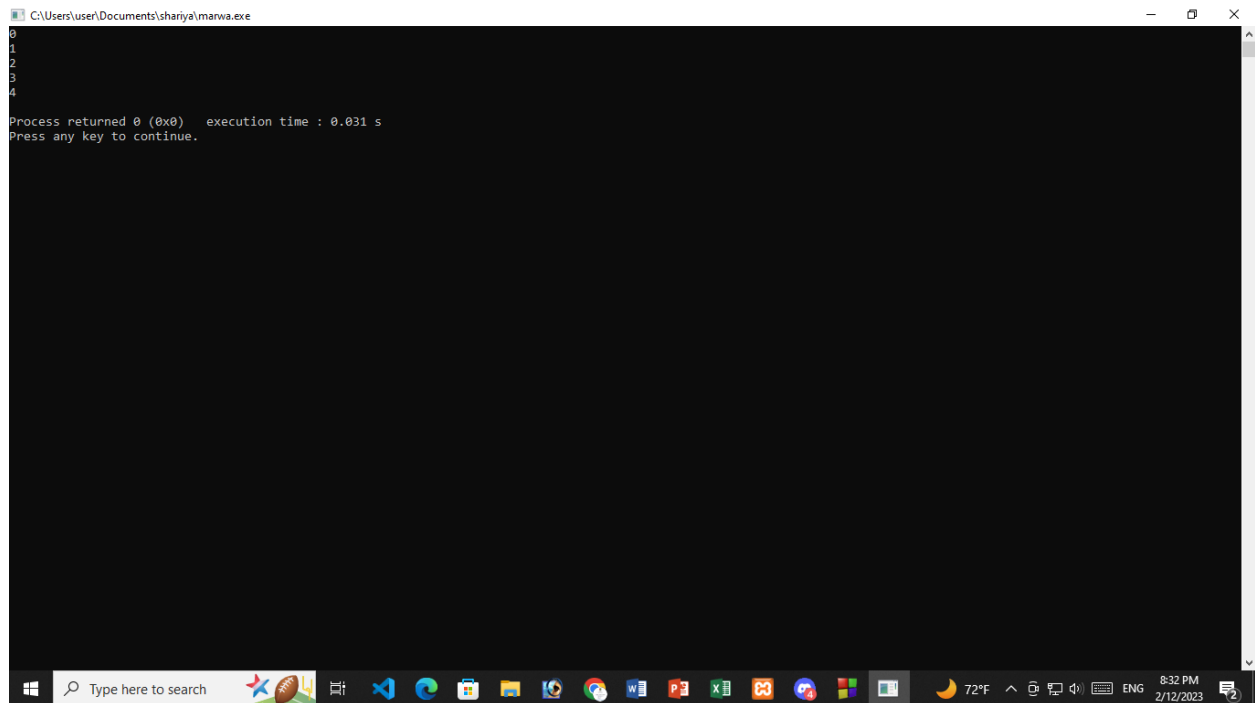
**for loop in C:**

### **Code:**

```
#include <stdio.h>

int main(void) {
    for (int i = 0; i < 5; i++) {
        printf("%d\n", i);
    }
    return 0;
}
```

### **Output:**



```
C:\Users\user\Documents\shariya\marwa.exe
0
1
2
3
4
Process returned 0 (0x0)   execution time : 0.031 s
Press any key to continue.
```



## **Problem-7**

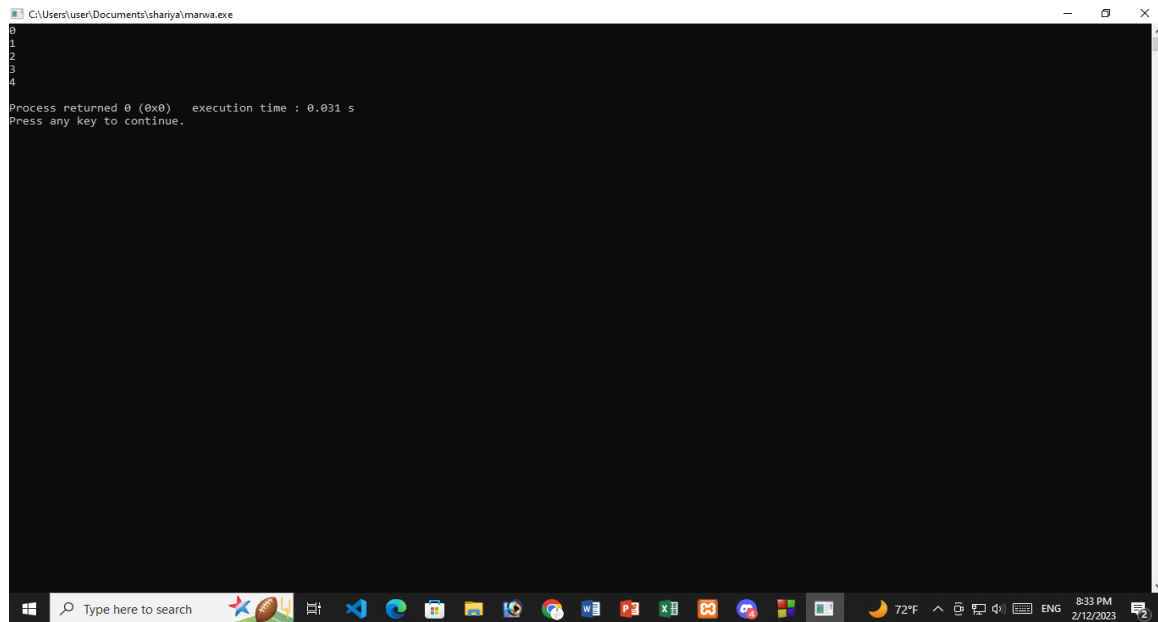
### **while loop in C:**

#### **Code:**

```
#include <stdio.h>

int main(void) {
    int counter = 0;
    while (counter < 5) {
        printf("%d\n", counter);
        counter++;
    }
    return 0;
}
```

#### **Ouput:**



```
C:\Users\user\Documents\shariya\manwa.exe
0
1
2
3
4
Process returned 0 (0x0) execution time : 0.031 s
Press any key to continue.
```

## **Problem-8**

**scanf in C to read an integer from the standard input:**

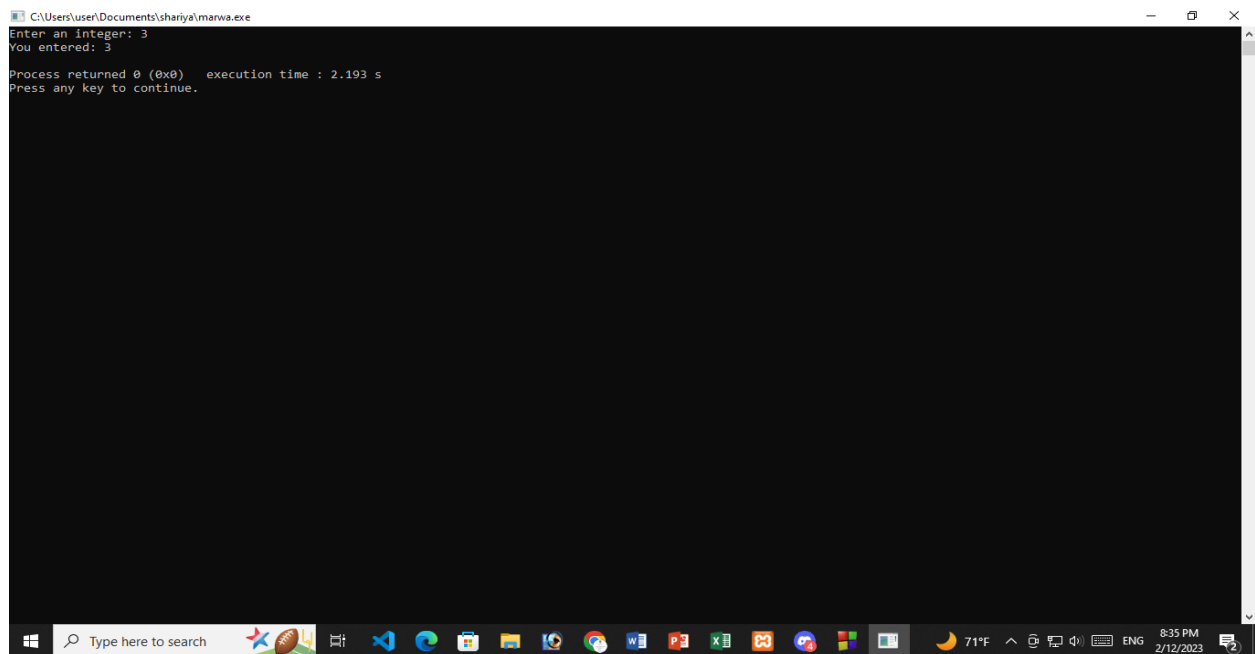
### **Code:**

```
#include <stdio.h>

int main(void) {
    int number;

    printf("Enter an integer: ");
    scanf("%d", &number);
    printf("You entered: %d\n", number);
    return 0;
}
```

### **Output**



```
C:\Users\user\Documents\shariya\marwa.exe
Enter an integer: 3
You entered: 3

Process returned 0 (0x0)   execution time : 2.193 s
Press any key to continue.
```

## **Problem-9**

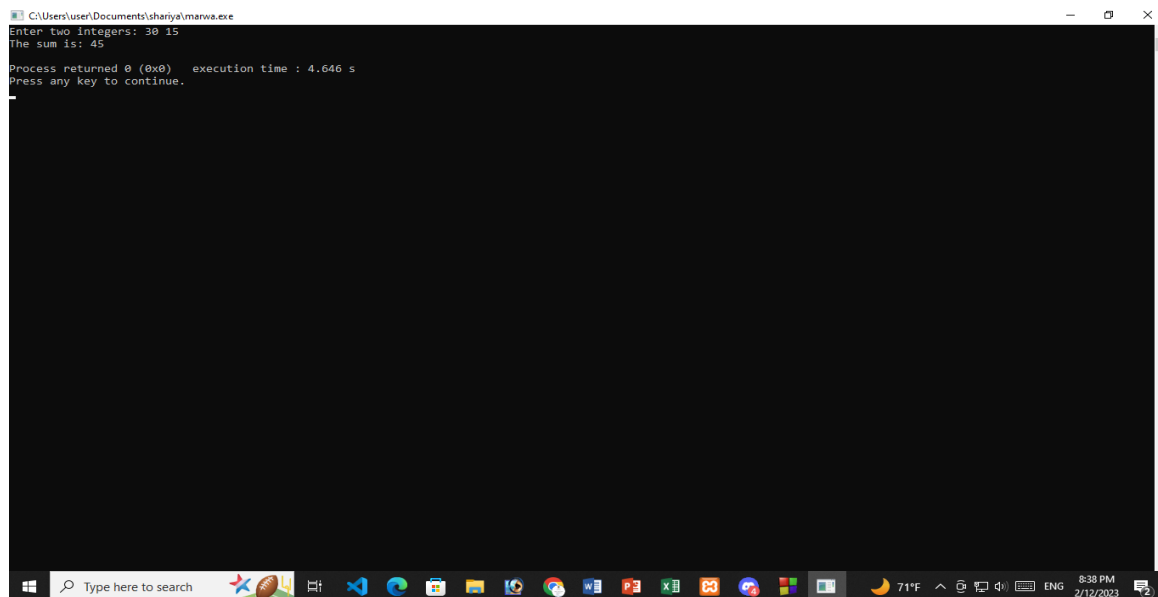
**simple program in C that calculates the sum of two numbers:**

### **Code:**

```
#include <stdio.h>

int main(void) {
    int a, b, sum;
    printf("Enter two integers: ");
    scanf("%d%d", &a, &b);
    sum = a + b;
    printf("The sum is: %d\n", sum);
    return 0;
}
```

### **Output:**



```
C:\Users\user\Documents\shariya\marwa.exe
Enter two integers: 30 15
The sum is: 45
Process returned 0 (0x0)   execution time : 4.646 s
Press any key to continue.
```

## **Problem-10**

**Simple C code that takes two integer inputs from the user and performs four basic arithmetic operations (addition, subtraction, multiplication, and division) on them:**

### **Code:**

```
#include <stdio.h>

int main() {
    int num1, num2;
    int sum, difference, product;
    float quotient;

    printf("Enter first integer: ");
    scanf("%d", &num1);

    printf("Enter second integer: ");
    scanf("%d", &num2);

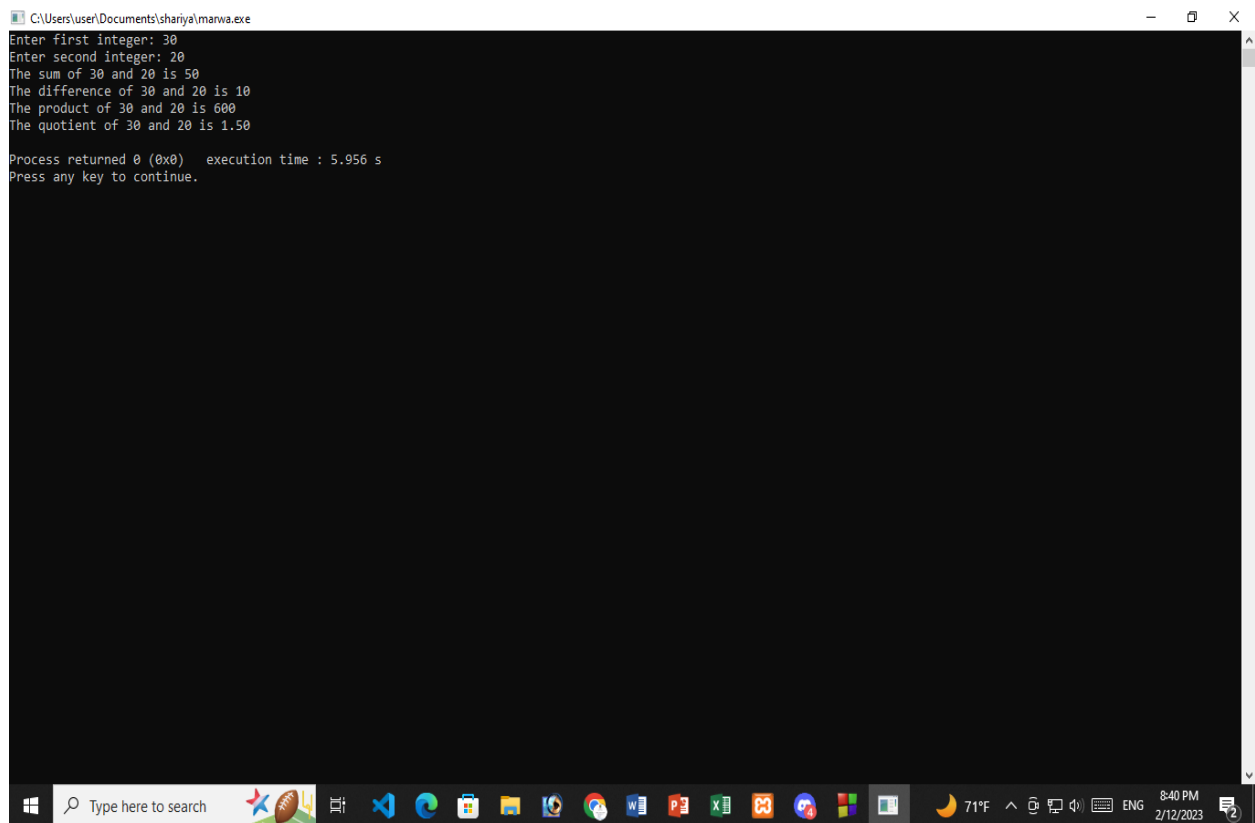
    sum = num1 + num2;
    difference = num1 - num2;
    product = num1 * num2;
    quotient = (float)num1 / num2;

    printf("The sum of %d and %d is %d\n", num1, num2, sum);
    printf("The difference of %d and %d is %d\n", num1, num2, difference);
    printf("The product of %d and %d is %d\n", num1, num2, product);
```

```
printf("The quotient of %d and %d is %.2f\n", num1, num2, quotient);

return 0;
}
```

## **Output:**



```
C:\Users\user\Documents\shariya\marwa.exe
Enter first integer: 30
Enter second integer: 20
The sum of 30 and 20 is 50
The difference of 30 and 20 is 10
The product of 30 and 20 is 600
The quotient of 30 and 20 is 1.50

Process returned 0 (0x0) execution time : 5.956 s
Press any key to continue.
```

## **Problem-11**

**simple C code that compares two numbers and prints the greater of the two:**

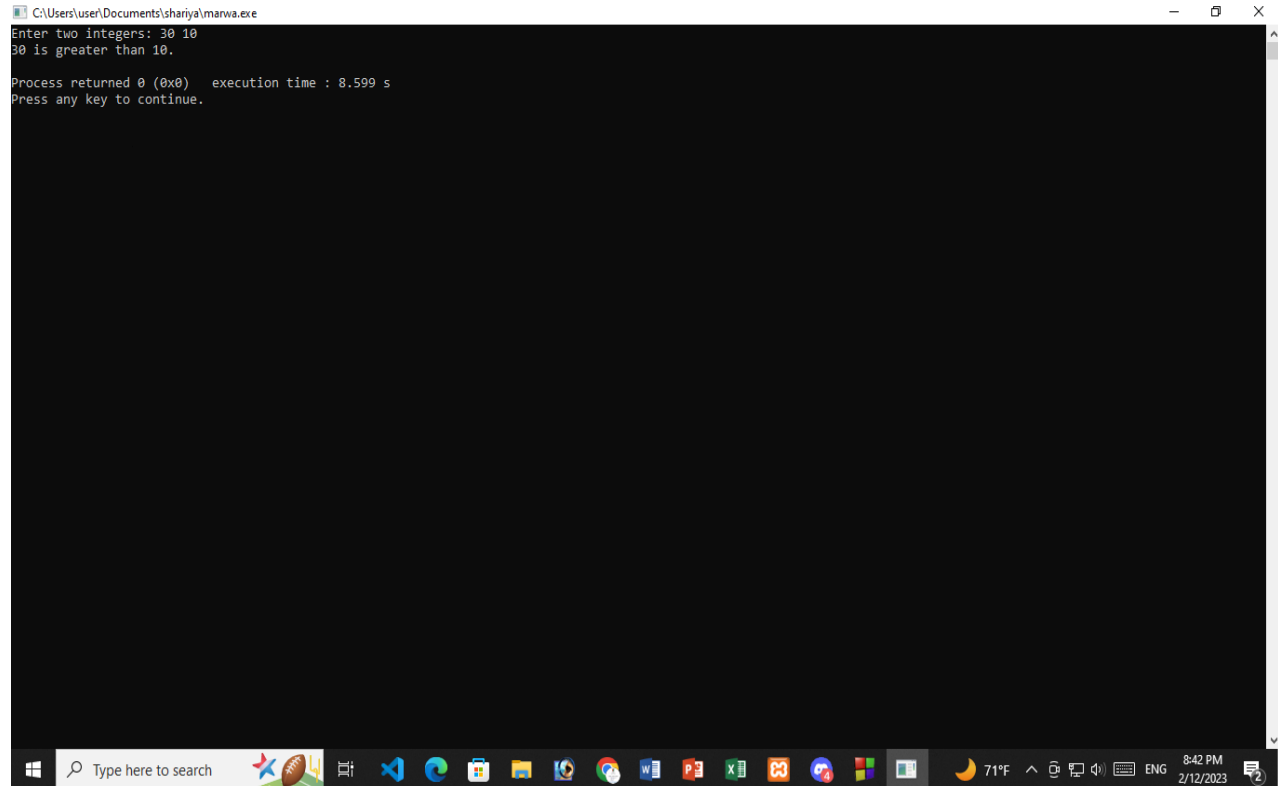
### **Code:**

```
#include <stdio.h>

int main() {
    int num1, num2;
    printf("Enter two integers: ");
    scanf("%d%d", &num1, &num2);
    if (num1 > num2)
        printf("%d is greater than %d.\n", num1, num2);
    else
        printf("%d is greater than %d.\n", num2, num1);

    return 0;
}
```

## Output:



A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\user\Documents\shariya\marwa.exe". The window has a black background with white text. The text inside the window reads: "Enter two integers: 30 10", "30 is greater than 10.", "Process returned 0 (0x0) execution time : 8.599 s", and "Press any key to continue.". The window is open on a Windows 10 desktop. The taskbar at the bottom shows the Start button, a search bar with the text "Type here to search", and several application icons including Microsoft Edge, File Explorer, and various office applications. The system tray on the right shows the date and time as "8:42 PM 2/12/2023" and the language as "ENG".

```
C:\Users\user\Documents\shariya\marwa.exe
Enter two integers: 30 10
30 is greater than 10.

Process returned 0 (0x0) execution time : 8.599 s
Press any key to continue.
```

## **Problem-12**

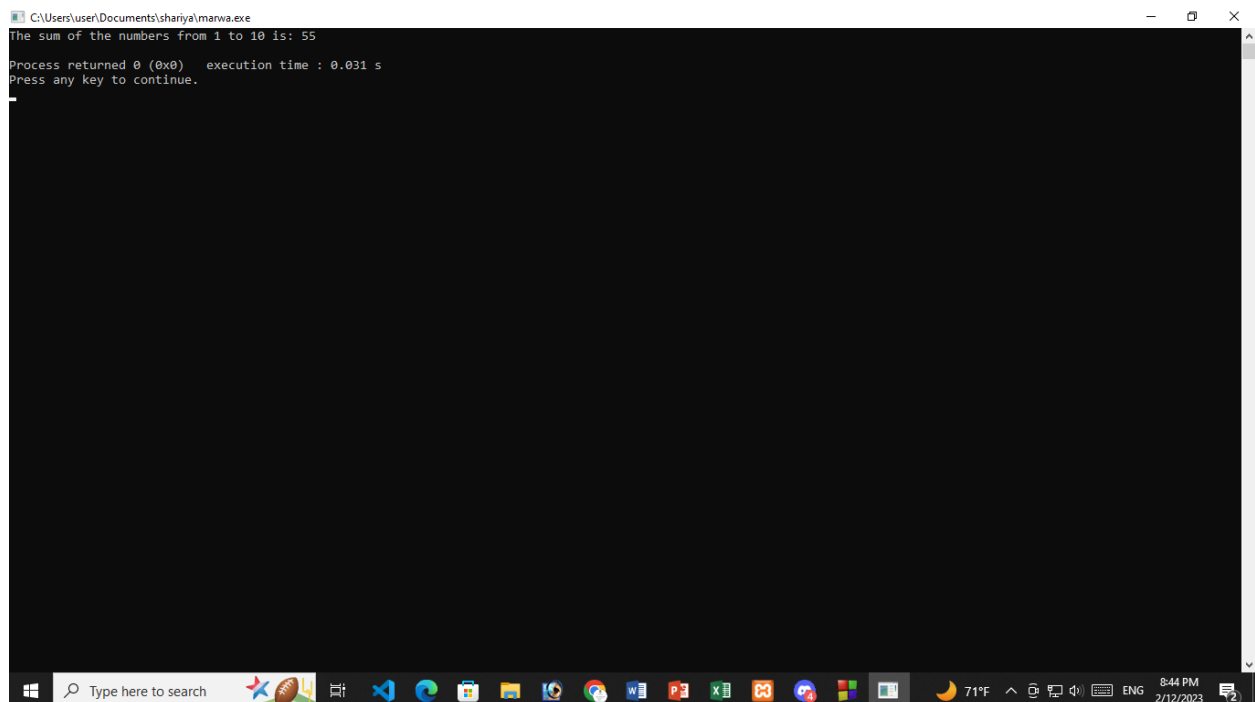
**simple C code that uses a for loop to calculate the sum of the numbers from 1 to 10:**

### **Code:**

```
#include <stdio.h>

int main() {
    int i, sum = 0;
    for (i = 1; i <= 10; i++)
        sum += i;
    printf("The sum of the numbers from 1 to 10 is: %d\n", sum);
    return 0;
}
```

### **Output**

A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\user\Documents\shariya\marwa.exe". The window contains the following text: "The sum of the numbers from 1 to 10 is: 55", "Process returned 0 (0x0) execution time : 0.031 s", and "Press any key to continue.". The window is set against a black background. At the bottom of the image, the Windows taskbar is visible, showing the search bar, several application icons, and system tray information including the temperature (71°F), date (2/12/2023), and time (8:44 PM).

```
C:\Users\user\Documents\shariya\marwa.exe
The sum of the numbers from 1 to 10 is: 55
Process returned 0 (0x0)   execution time : 0.031 s
Press any key to continue.
```