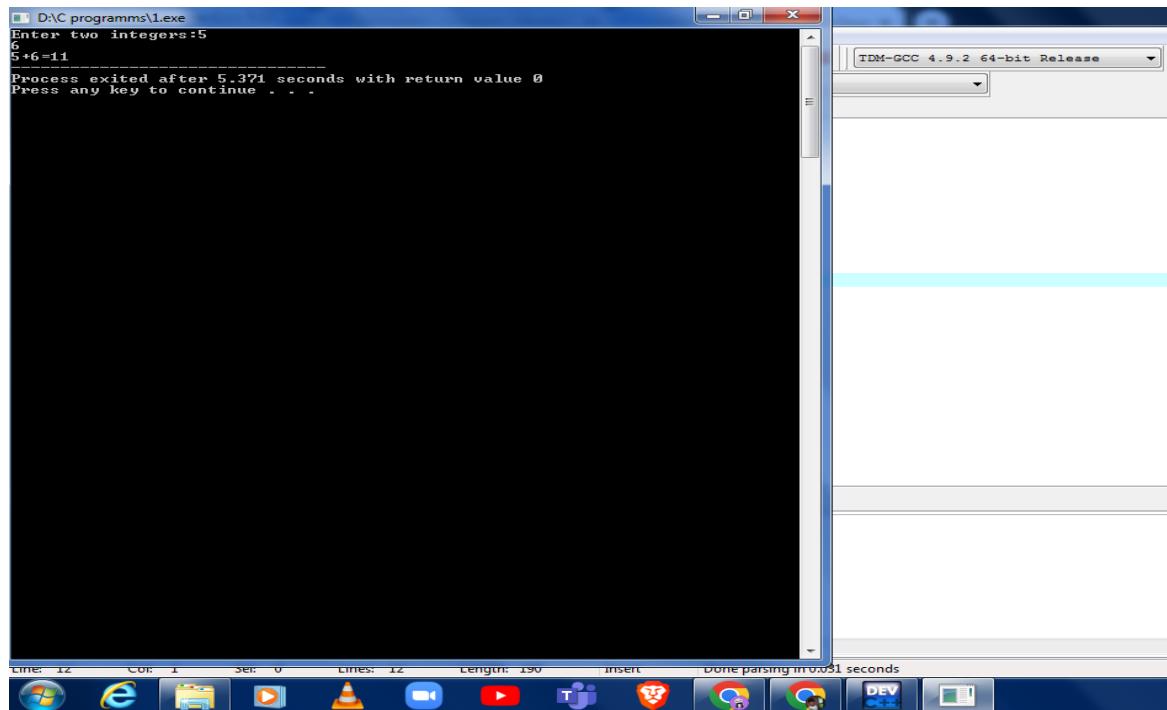


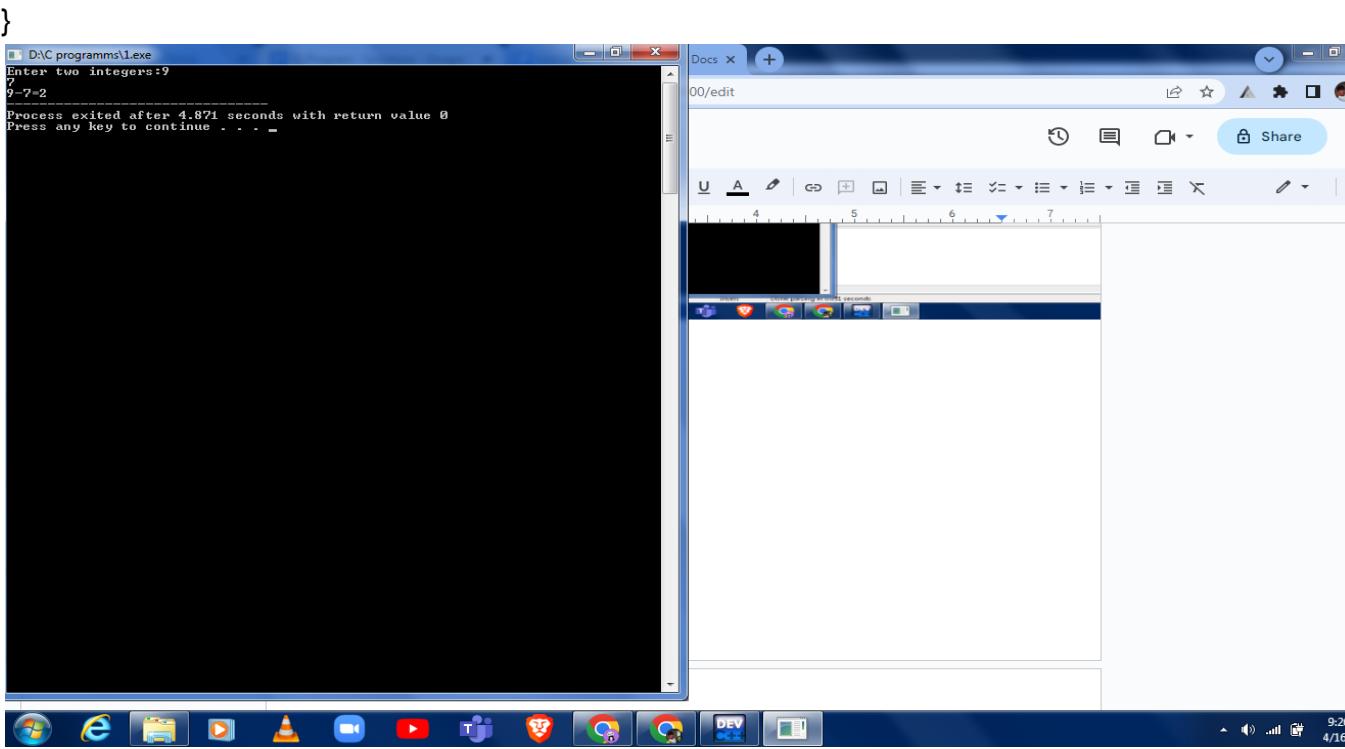
## 1. Sum of two numbers

```
#include <stdio.h>
int main()
{
    int a,b,sum;
    printf("Enter two integers:");
    scanf("%d%d",&a,&b);
    sum=a+b;
    printf("%d+%d=%d",a,b,sum);
    return 0;
}
```



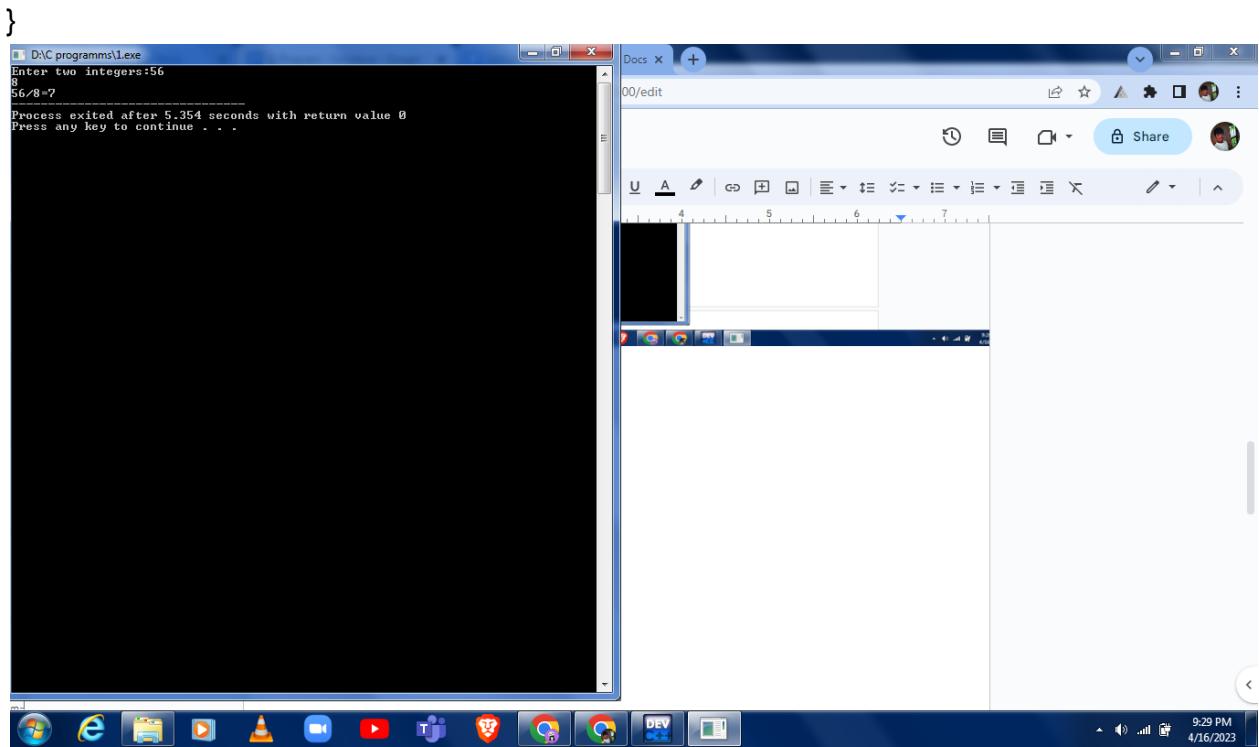
## 2. Difference of two numbers

```
#include<stdio.h>
int main()
{
    int a,b,diff;
    printf("Enter two integers:");
    scanf("%d%d",&a,&b);
    diff=a-b;
    printf("%d-%d=%d",a,b,diff);
    return 0;
}
```



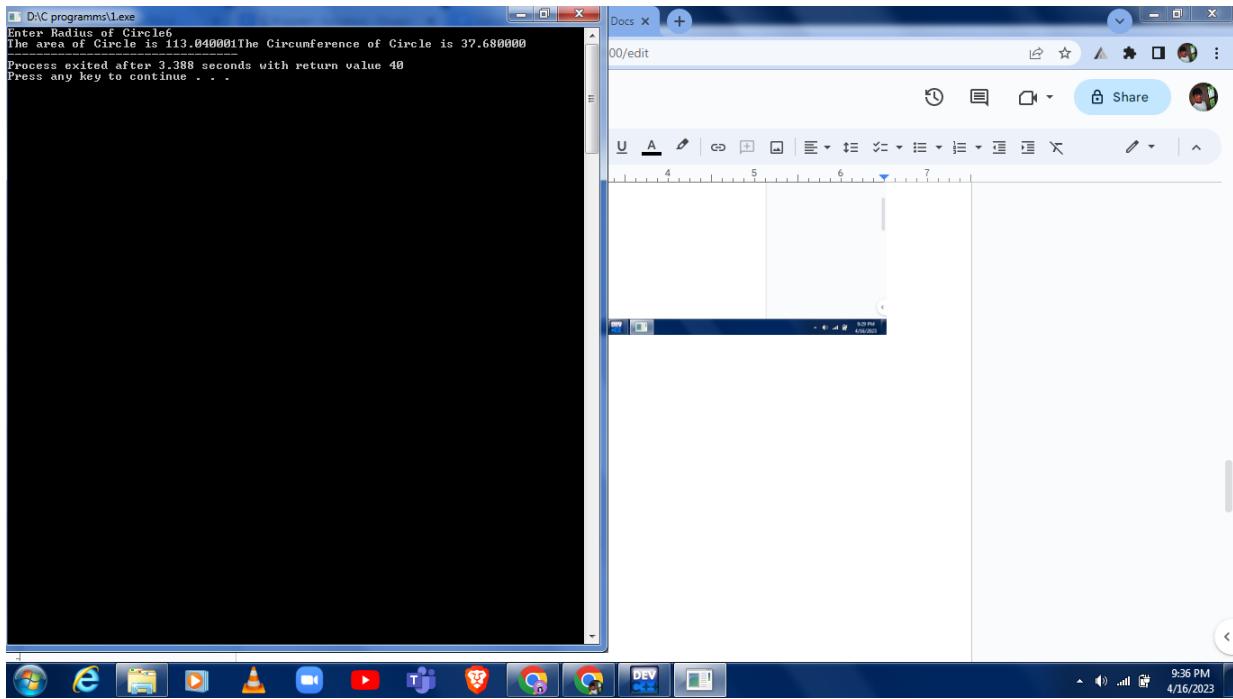
### 3.Div of two numbers

```
#include <stdio.h>
int main()
{
    int a,b,div;
    printf("Enter two integers:");
    scanf("%d%d",&a,&b);
    div=a/b;
    printf("%d/%d=%d",a,b,div);
    return 0;
```



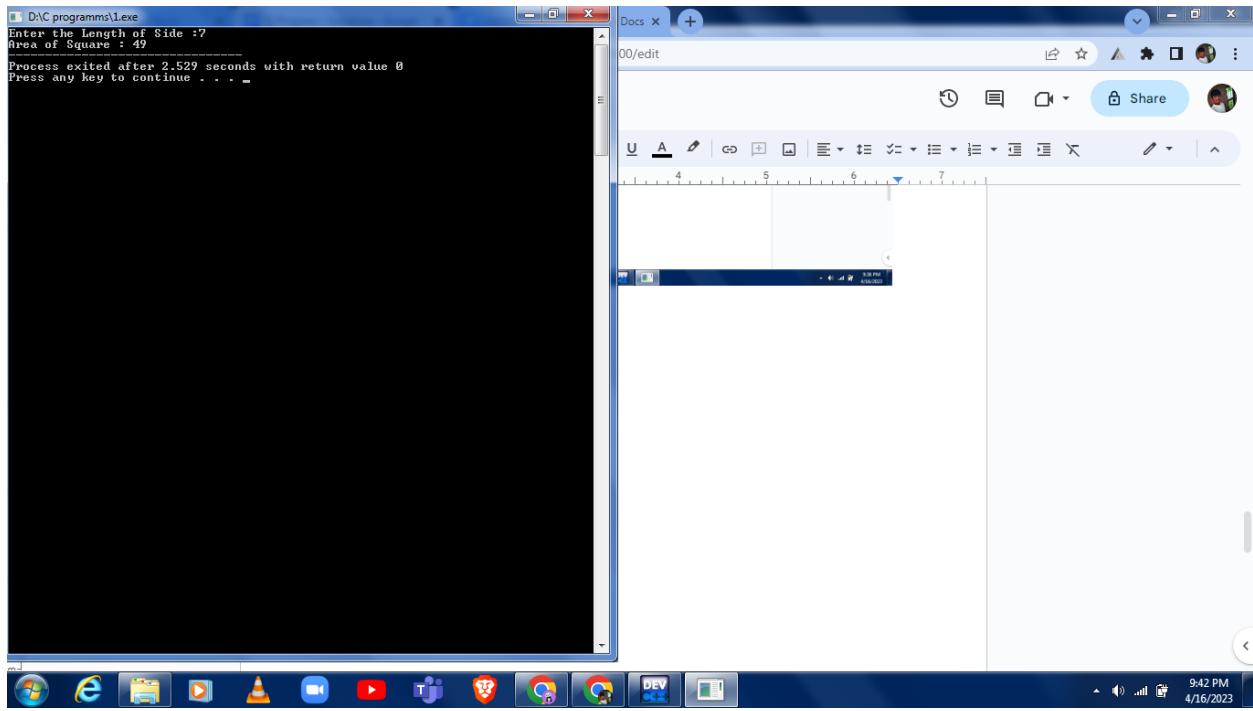
#### 4. Calculate area and circumference of circle

```
#include<stdio.h>
void main()
{
    float radius,area,cf;
    printf("Enter Radius of Circle",radius);
    scanf("%f",&radius);
    area=3.14*radius*radius;
    printf("The area of Circle is %f",area);
    cf=2*3.14*radius;
    printf("The Circumference of Circle is %f",cf);
}
```



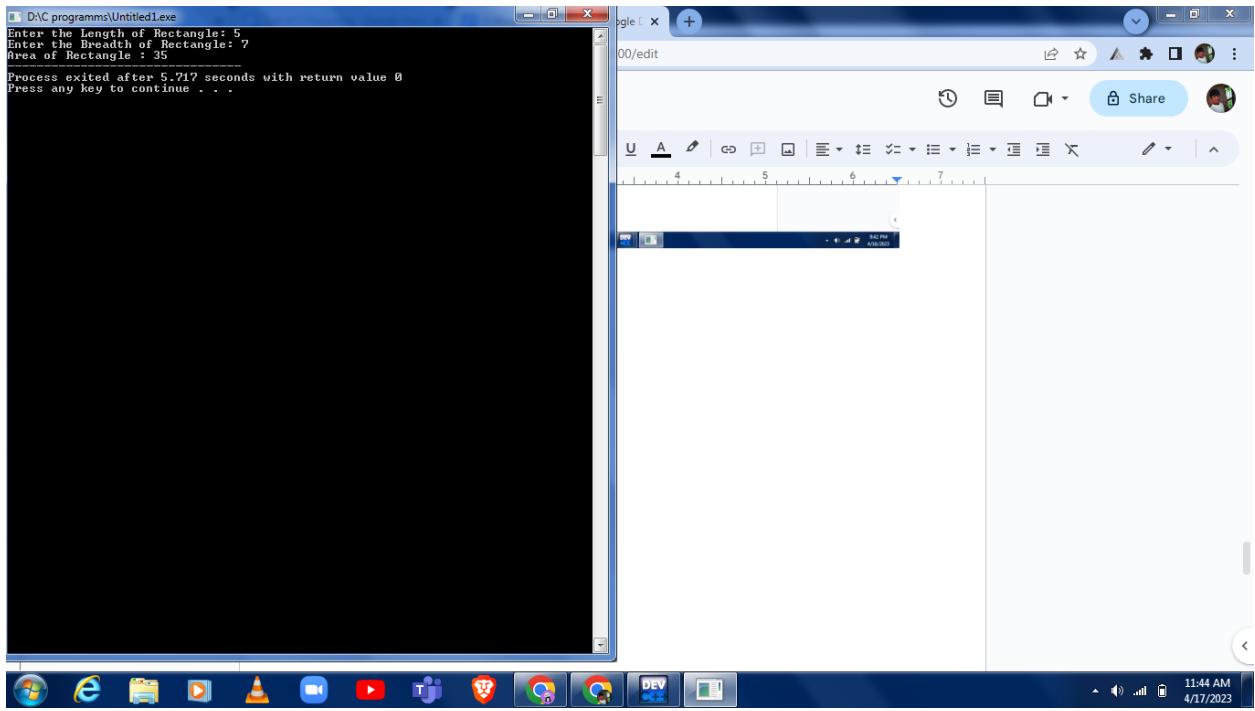
## 5. Area of square

```
#include<stdio.h>
int main()
{
    int side,area;
    printf("Enter the Length of Side :",side);
    scanf("%d",&side);
    area = side * side;
    printf("Area of Square : %d",area);
    return 0;
}
```



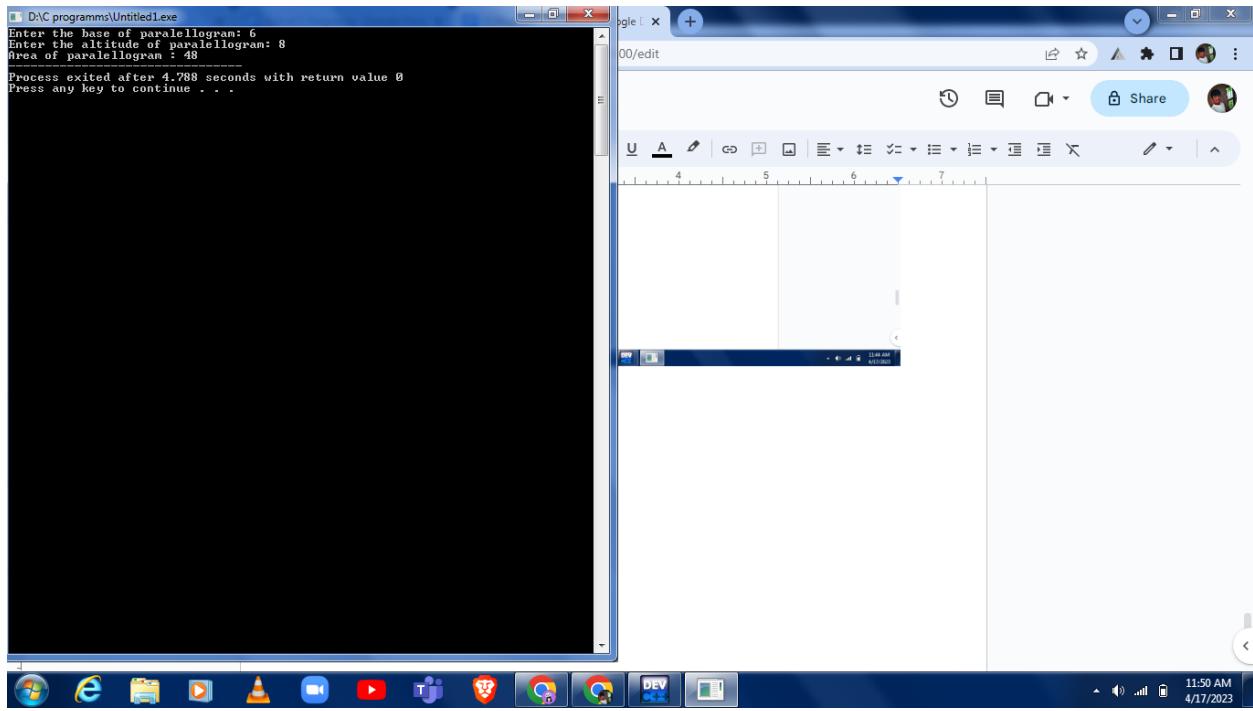
## 6. Area of rectangle

```
#include<stdio.h>
int main()
{
    int length,breadth,area;
    printf("Enter the Length of Rectangle: ");
    scanf("%d", &length);
    printf("Enter the Breadth of Rectangle: ");
    scanf("%d", &breadth);
    area = length * breadth;
    printf("Area of Rectangle : %d",area);
    return 0;
}
```



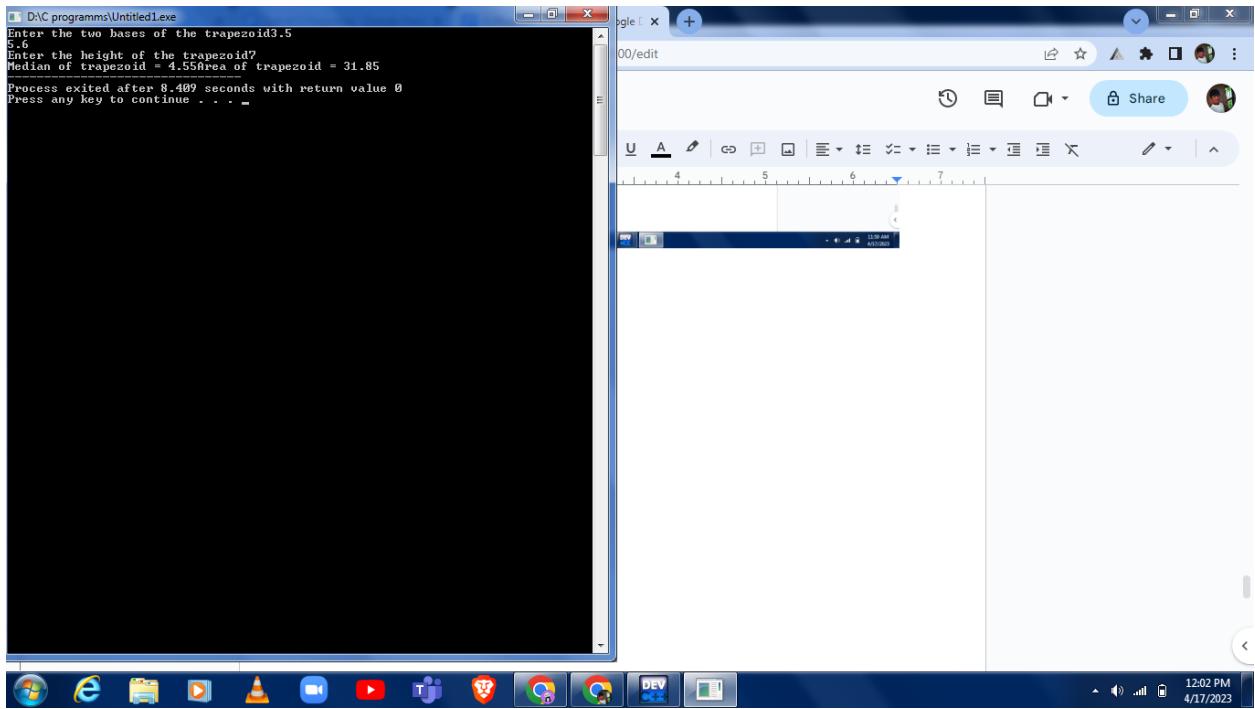
## 7.area of parallelogram

```
#include<stdio.h>
int main()
{
    int base,altitude,area;
    printf("Enter the base of parallelogram: ");
    scanf("%d", &base);
    printf("Enter the altitude of parallelogram: ");
    scanf("%d", &altitude);
    area = base * altitude;
    printf("Area of parallelogram : %d",area);
    return 0;
}
```



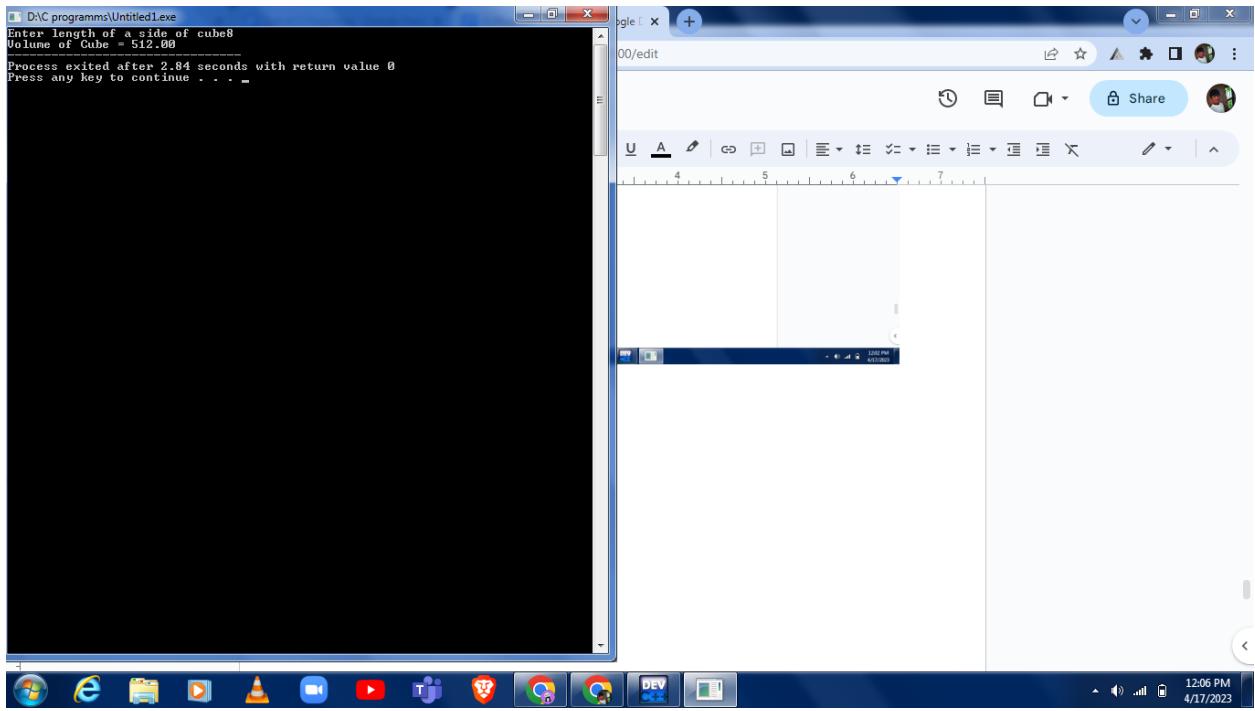
### 8. Area of trapezoid

```
#include<stdio.h>
int main()
{
    float base1,base2,height,area,median;
    printf("Enter the two bases of the trapezoid");
    scanf("%f%f",&base1,&base2);
    printf("Enter the height of the trapezoid");
    scanf("%f",&height);
    area=0.5*(base1+base2)*height;
    median=0.5*(base1+base2);
    printf("Median of trapezoid = %.2f",median);
    printf("Area of trapezoid = %.2f",area);
    return 0;
}
```



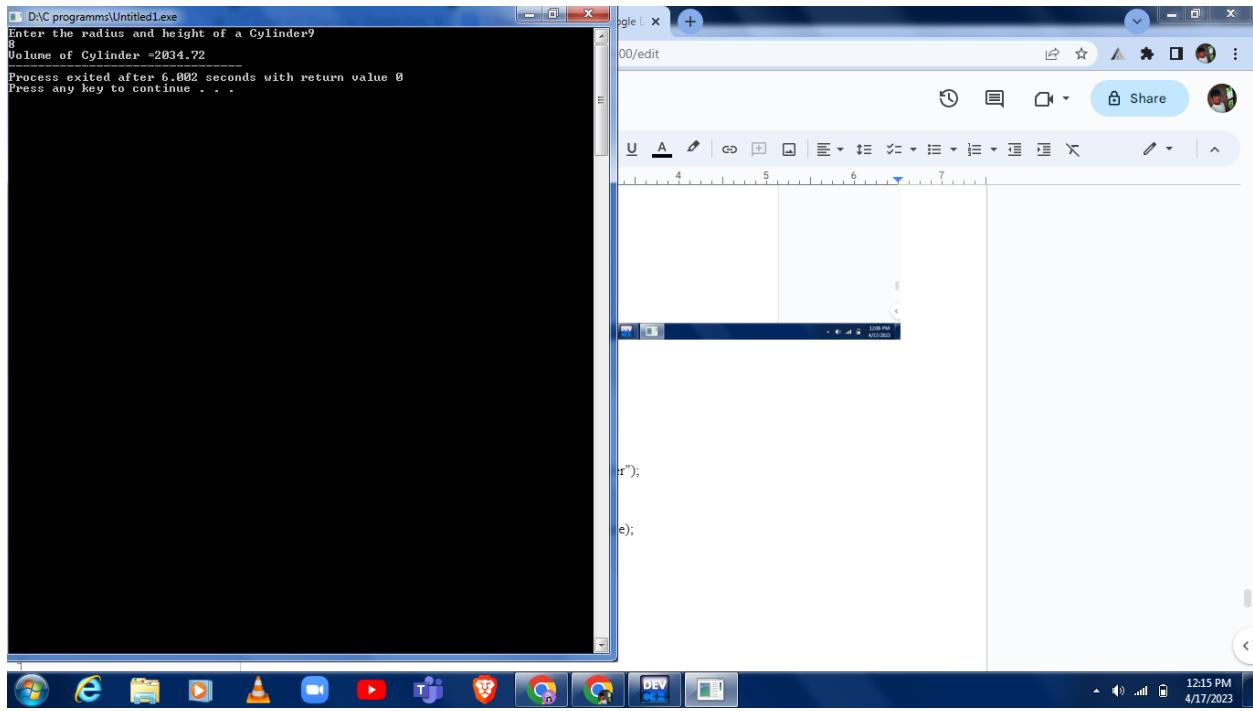
## 9. Calculate Volume of Cube

```
#include <stdio.h>
int main()
{
    float side,volume;
    printf("Enter length of a side of cube");
    scanf("%f", &side);
    volume = side*side*side;
    printf("Volume of Cube = %.2f", volume);
    return 0;
}
```



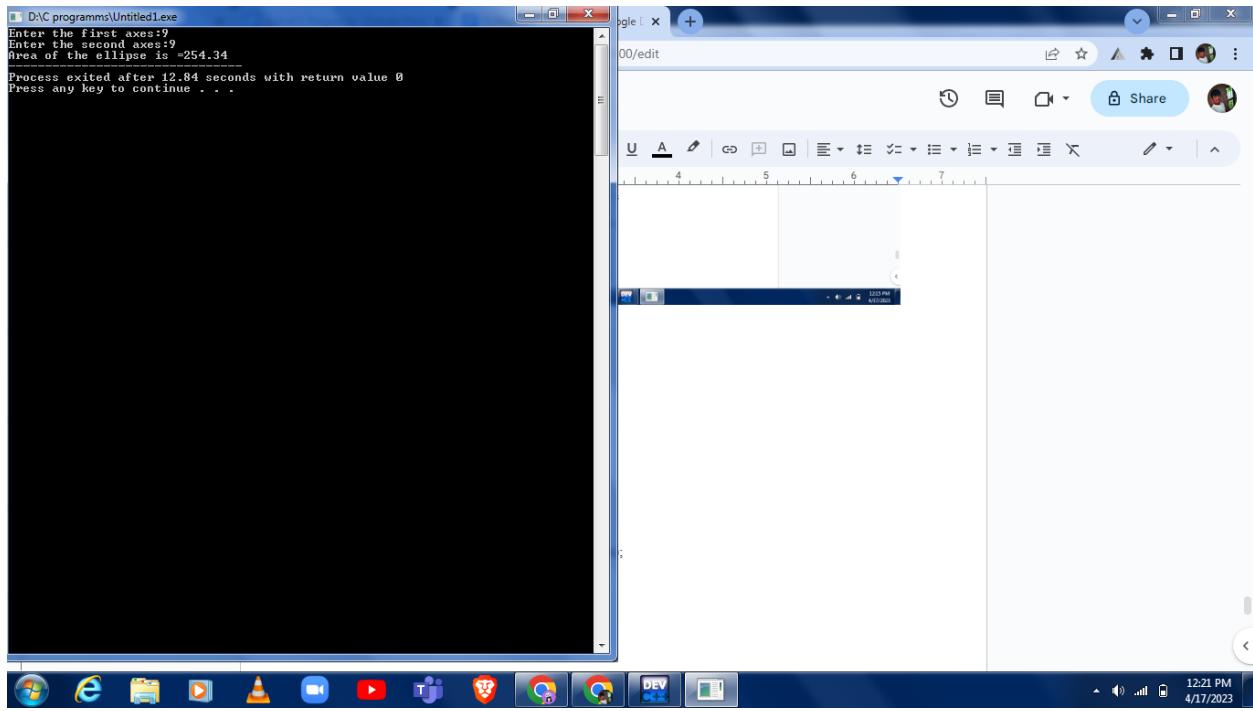
#### 10. Calculate Volume of Cylinder

```
#include <stdio.h>
int main()
{
    float radius,height,volume,pi=3.14;
    printf("Enter the radius and height of a Cylinder");
    scanf("%f%f",&radius,&height);
    volume = pi*radius*radius*height;
    printf("Volume of Cylinder =%.2f",volume);
    return 0;
}
```



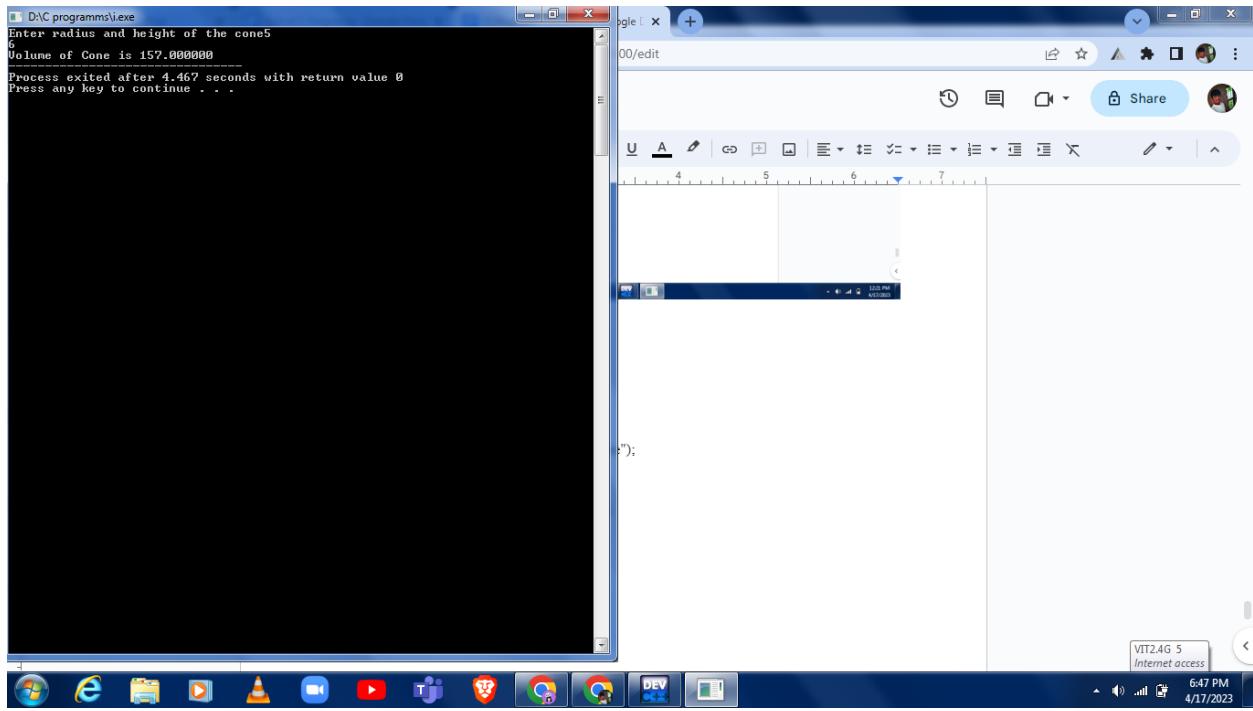
### 11. Calculate Area of Ellipse

```
#include<stdio.h>
int main()
{
    int a,b;
    float area,pi=3.14;
    printf("Enter the first axes:");
    scanf("%d", &a);
    printf("Enter the second axes:");
    scanf("%d", &b);
    area =pi*a*b;
    printf("Area of the ellipse is =%.2f", area);
    return 0;
}
```



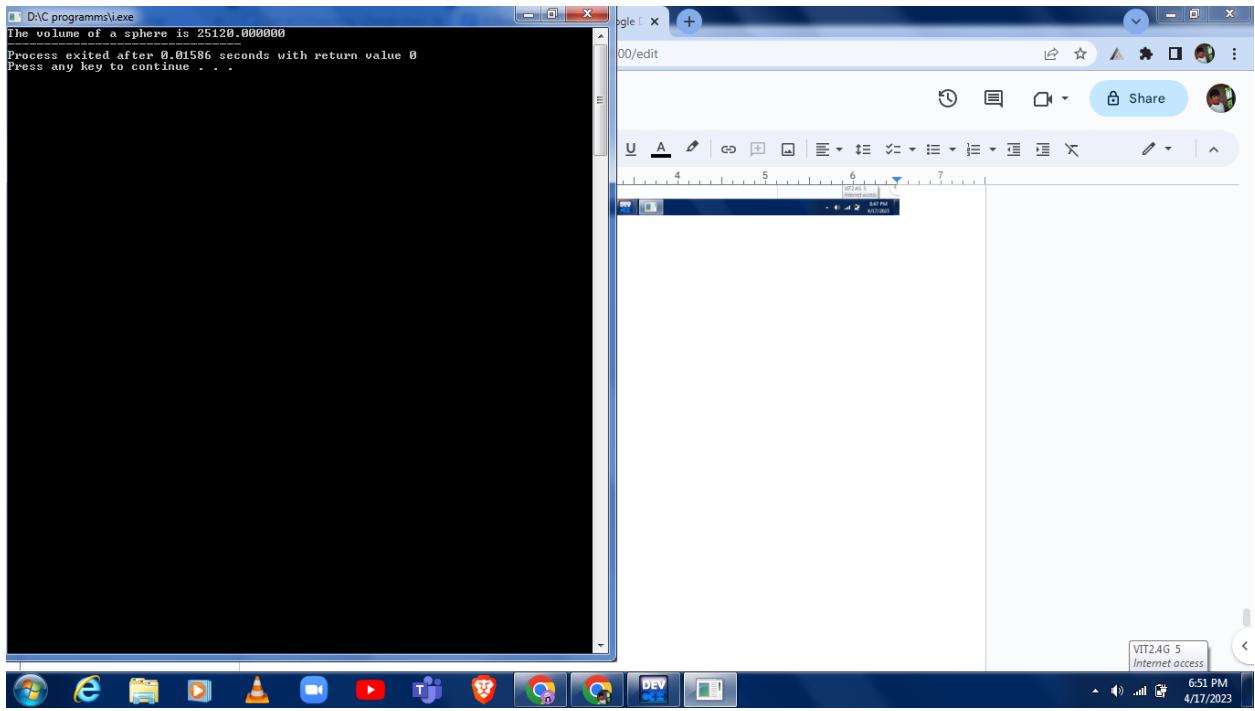
### 13. Volume of Pyramid

```
#include<stdio.h>
int main()
{
    float pi = 3.14;
    float r, h, volume;
    printf("Enter radius and height of the cone");
    scanf("%f%f", &r, &h);
    volume = (pi*r*r*h) / 3.0;
    printf("Volume of Cone is %f", volume);
    return 0;
}
```



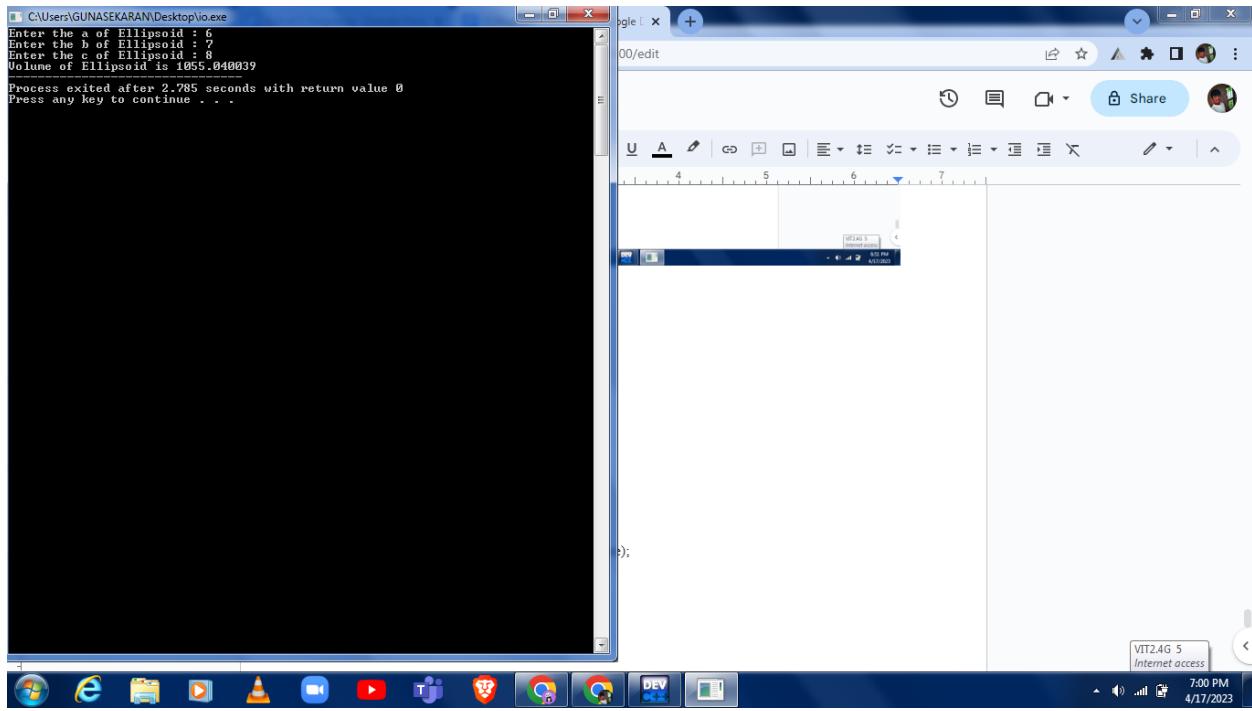
#### 14. Volume of sphere

```
#include<stdio.h>
int main()
{
    float vol,pi=3.14;
    int rad;
    rad=20;
    vol=((4/3)*(pi)*rad*rad*rad);
    printf("The volume of a sphere is %.2f",vol);
    return 0;
}
```



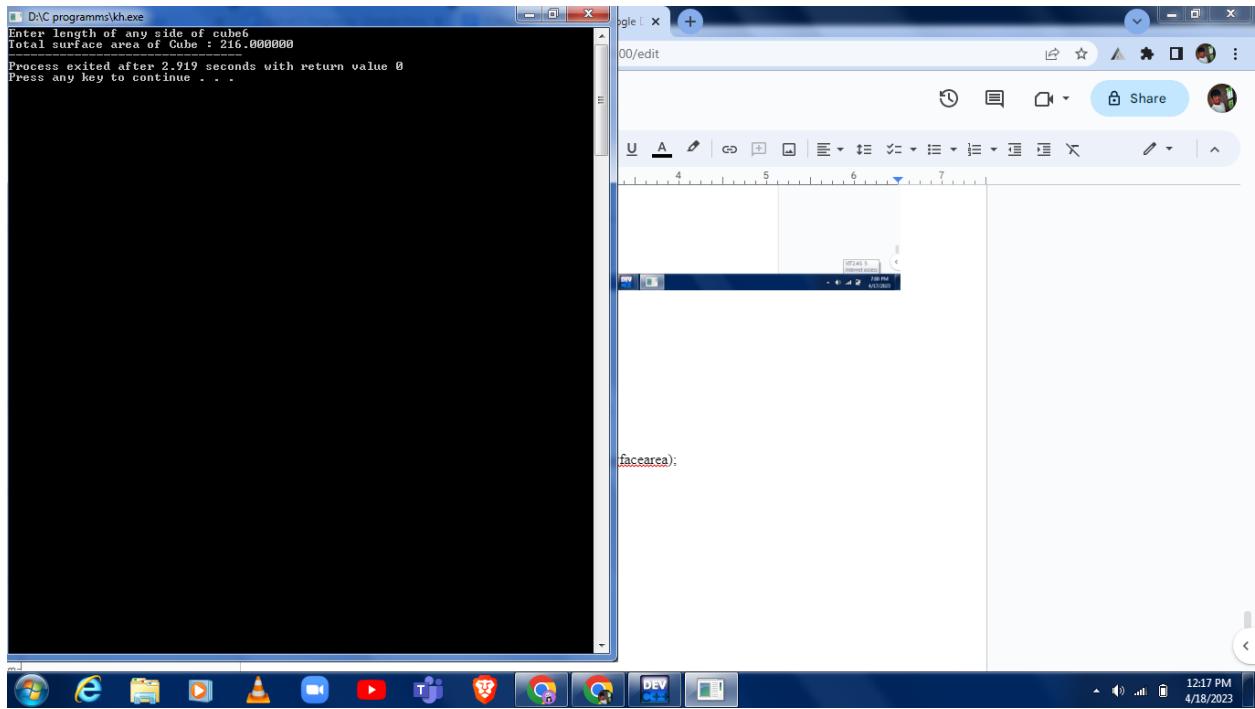
### 15. Calculate Volume of Ellipsoid

```
#include <stdio.h>
int main()
{
    int a,b,c;
    float volume;
    float pi=3.14;
    printf("Enter the a of Ellipsoid : ");
    scanf("%d", &a);
    printf("Enter the b of Ellipsoid : ");
    scanf("%d", &b);
    printf("Enter the c of Ellipsoid : ");
    scanf("%d", &c);
    volume = (4/3)*(pi*a*b*c);
    printf("Volume of Ellipsoid is %f",volume);
    return 0;
}
```



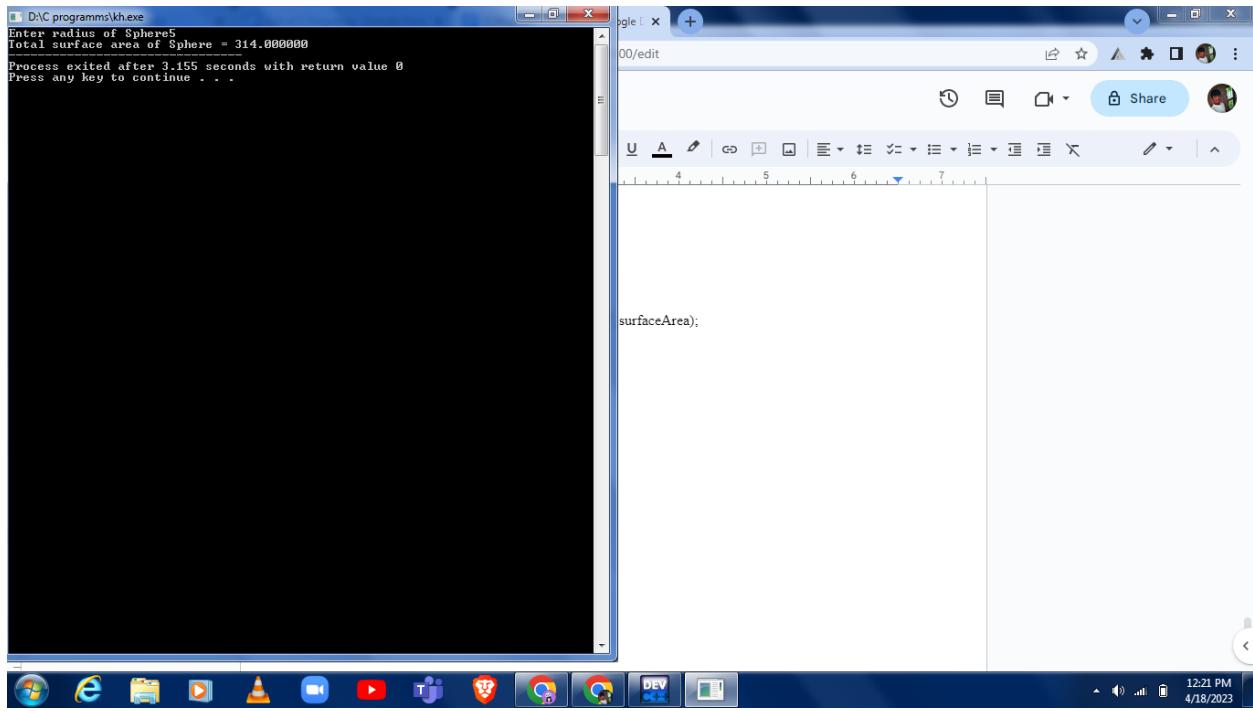
### 16. Calculate Surface area of Cube

```
#include <stdio.h>
int main()
{
    float side, surfacearea;
    printf("Enter length of any side of cube");
    scanf("%f", &side);
    surfacearea = 6*side*side;
    printf("Total surface area of Cube : %f",surfacearea);
    return 0;
}
```



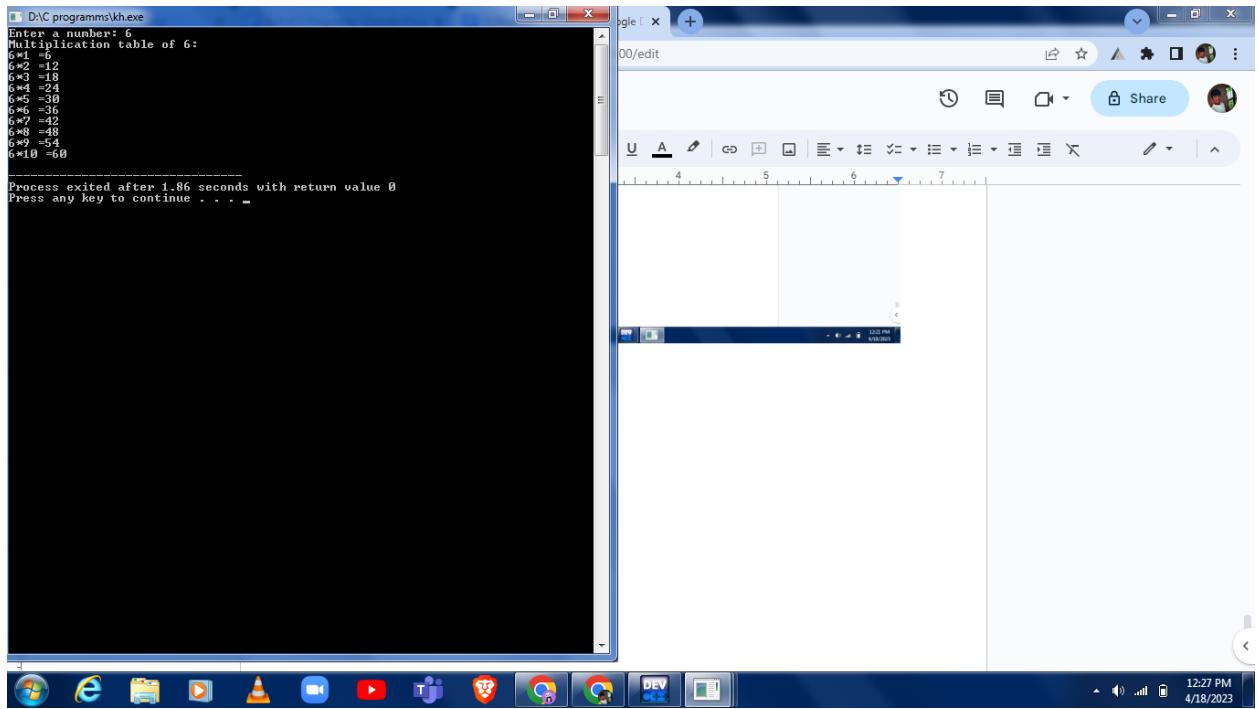
### 17. Surface area of a sphere

```
#include <stdio.h>
int main()
{
    float radius,surfaceArea,pi=3.14;
    printf("Enter radius of Sphere");
    scanf("%f", &radius);
    surfaceArea = 4*pi*radius*radius;
    printf("Total surface area of Sphere = %f", surfaceArea);
    return 0;
}
```



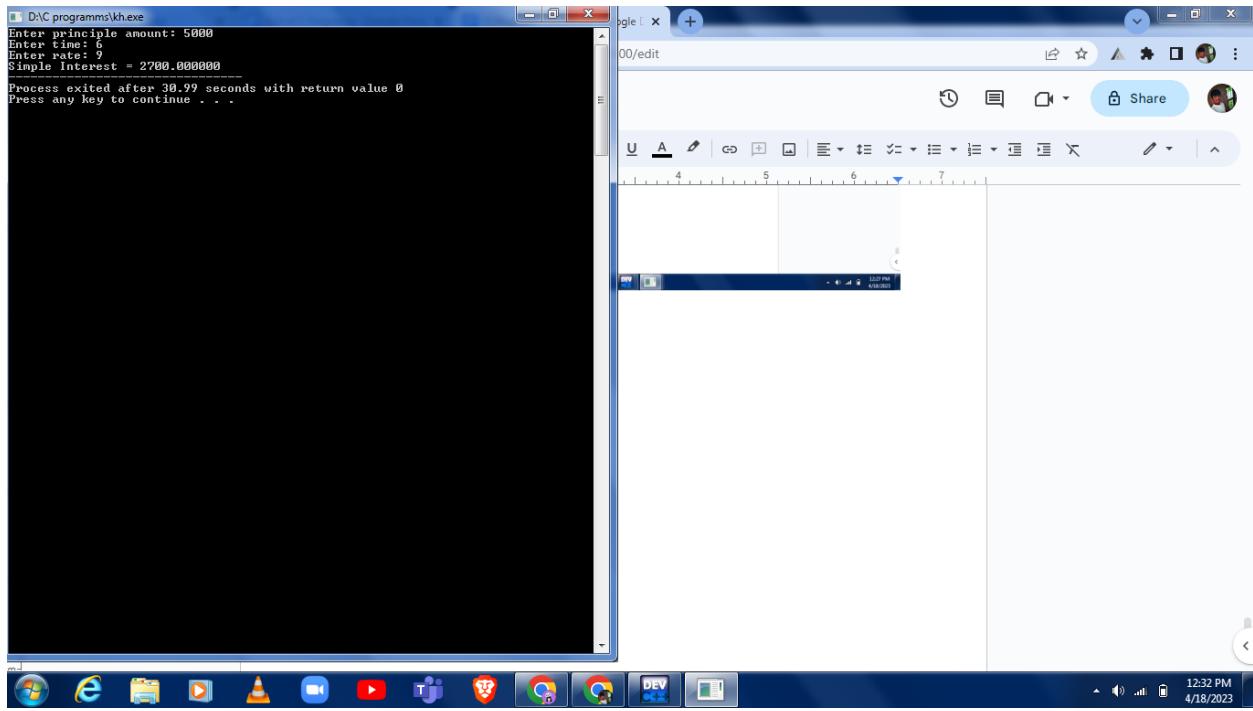
### 18. Print Multiplication tables

```
#include <stdio.h>
int main()
{
    int n,i;
    printf("Enter a number: ");
    scanf("%d",&n);
    printf("Multiplication table of %d:\n",n);
    for (i=1;i<=10;i++)
        printf("%d*%d=%d\n",n,i,n*i);
    return 0;
}
```



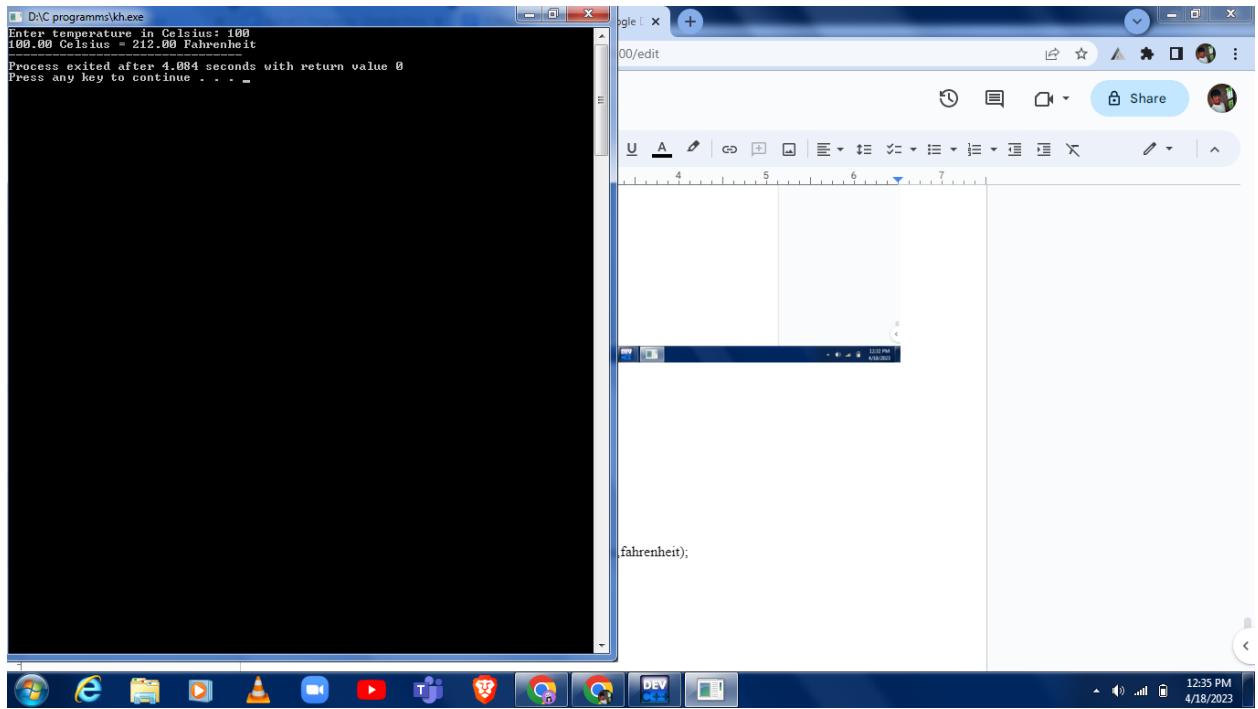
### 19. Compute Simple Interest (SI)

```
#include <stdio.h>
int main()
{
    float principle,time,rate,SI;
    printf("Enter principle amount: ");
    scanf("%f", &principle);
    printf("Enter time: ");
    scanf("%f", &time);
    printf("Enter rate: ");
    scanf("%f", &rate);
    SI = (principle*time*rate)/100;
    printf("Simple Interest = %f", SI);
    return 0;
}
```



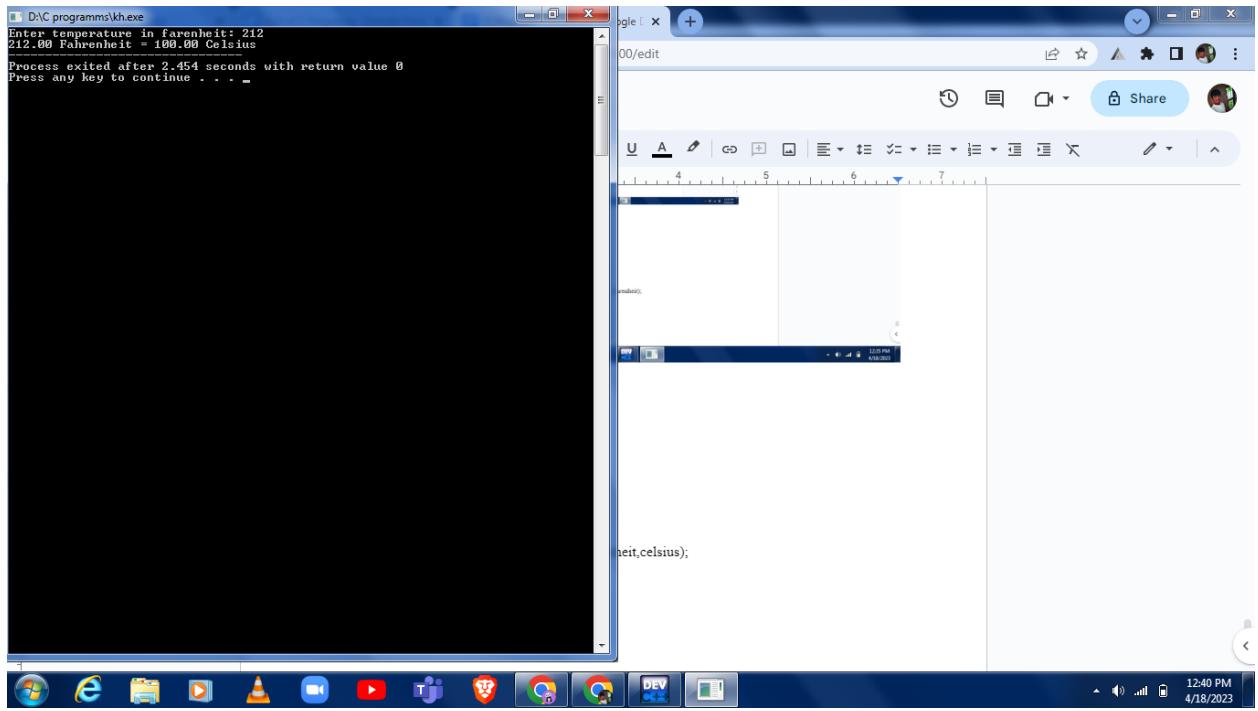
## 20. Convert Degree to Fahrenheit

```
#include <stdio.h>
int main()
{
    float celsius,fahrenheit;
    printf("Enter temperature in Celsius: ");
    scanf("%f",&celsius);
    fahrenheit=(celsius*9/5)+32;
    printf("%f Celsius = %f Fahrenheit",celsius,fahrenheit);
    return 0;
}
```



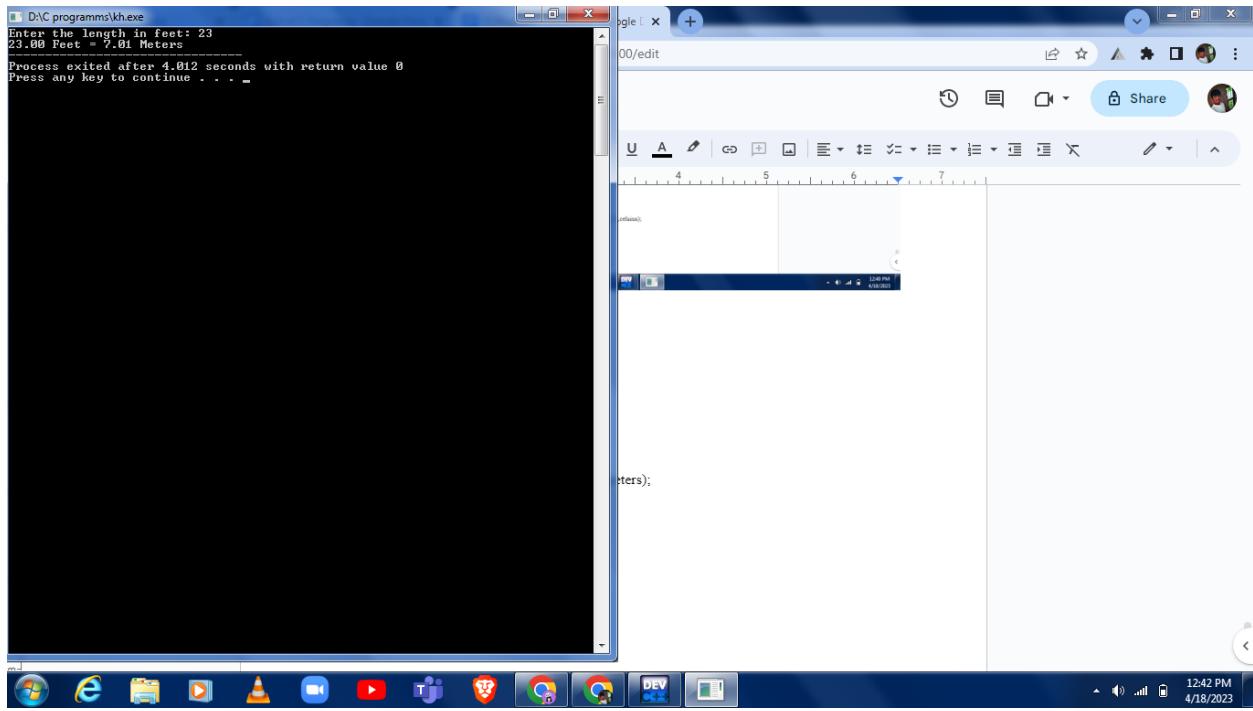
## 21. Convert Fahrenheit to Degree

```
#include <stdio.h>
int main()
{
    float celsius,fahrenheit;
    printf("Enter temperature in farenheit: ");
    scanf("%f",&fahrenheit);
    celsius=(fahrenheit-32)*5/9;
    printf("%f Fahrenheit = %f Celsius",fahrenheit,celsius);
    return 0;
}
```



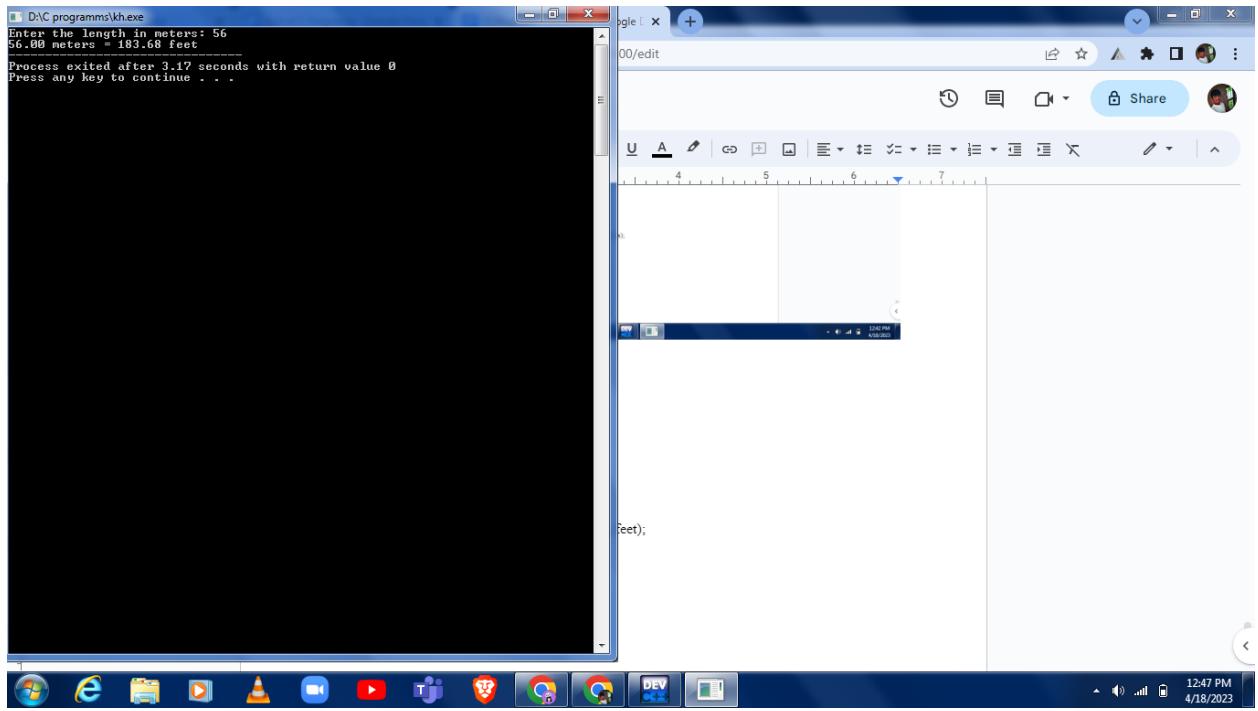
## 22. Convert feet to meters

```
#include <stdio.h>
int main()
{
    float feet,meters;
    printf("Enter the length in feet: ");
    scanf("%f",&feet);
    meters = feet/3.28;
    printf("%.2f Feet = %.2f Meters", feet, meters);
    return 0;
}
```



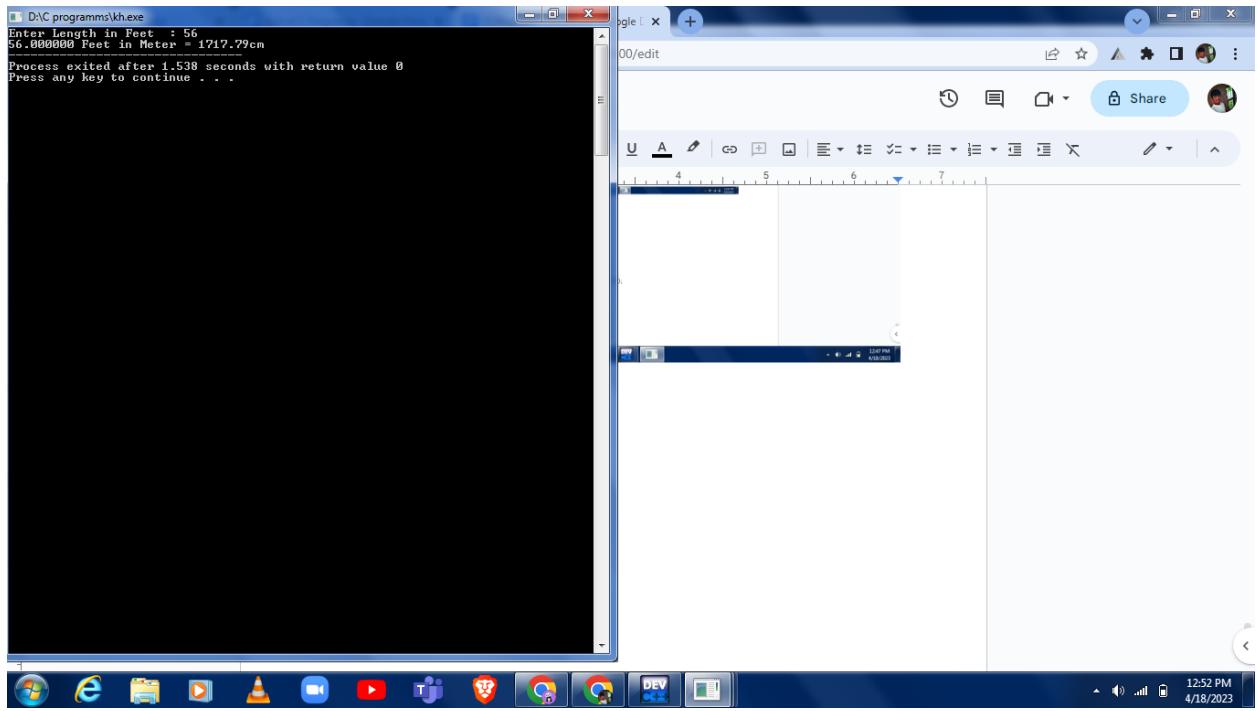
### 23. Convert meters to feet

```
#include <stdio.h>
int main()
{
    float meters,feet;
    printf("Enter the length in meters: ");
    scanf("%f",&meters);
    feet = 3.28*meters;
    printf("%.2f meters = %.2f feet", meters, feet);
    return 0;
}
```



#### 24. Convert Feet to Centimeters

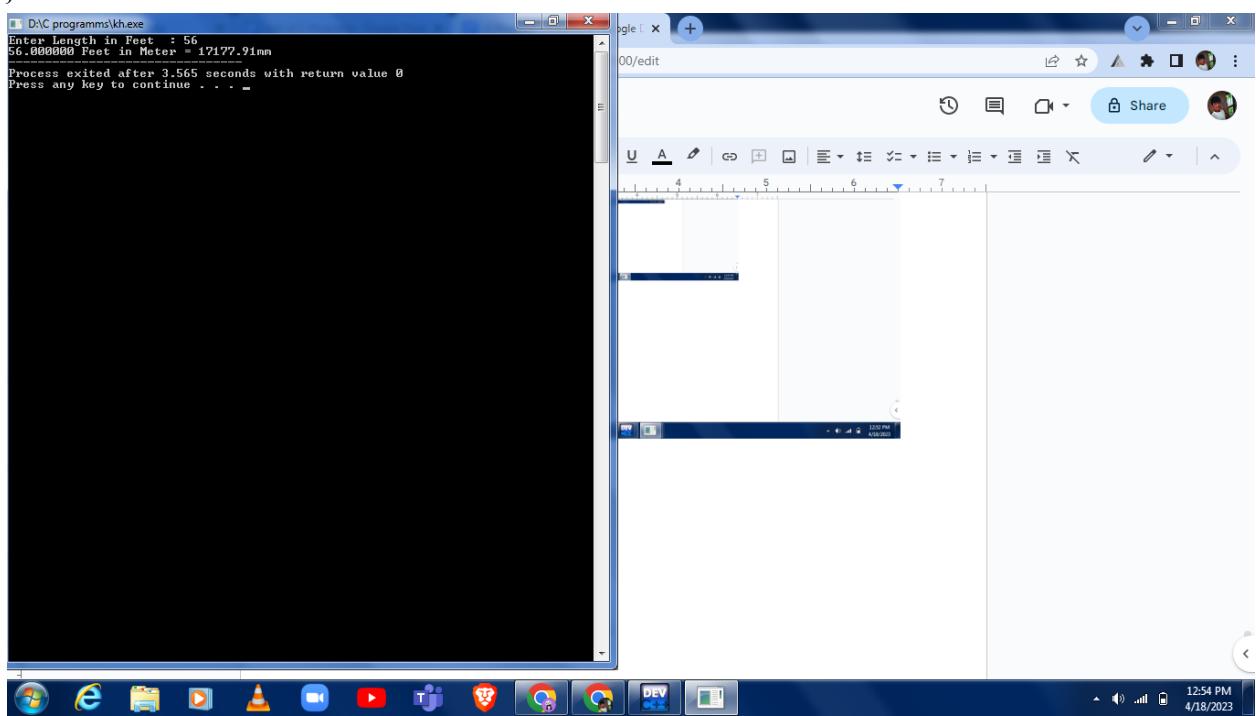
```
#include<stdio.h>
int main()
{
    float cm,feet;
    printf("Enter Length in Feet : ");
    scanf("%f", &feet);
    cm = (feet/3.26)*100;
    printf("%f Feet in Meter = %.2fcm",feet,cm);
}
```



## 25. Convert Feet to Milimeter

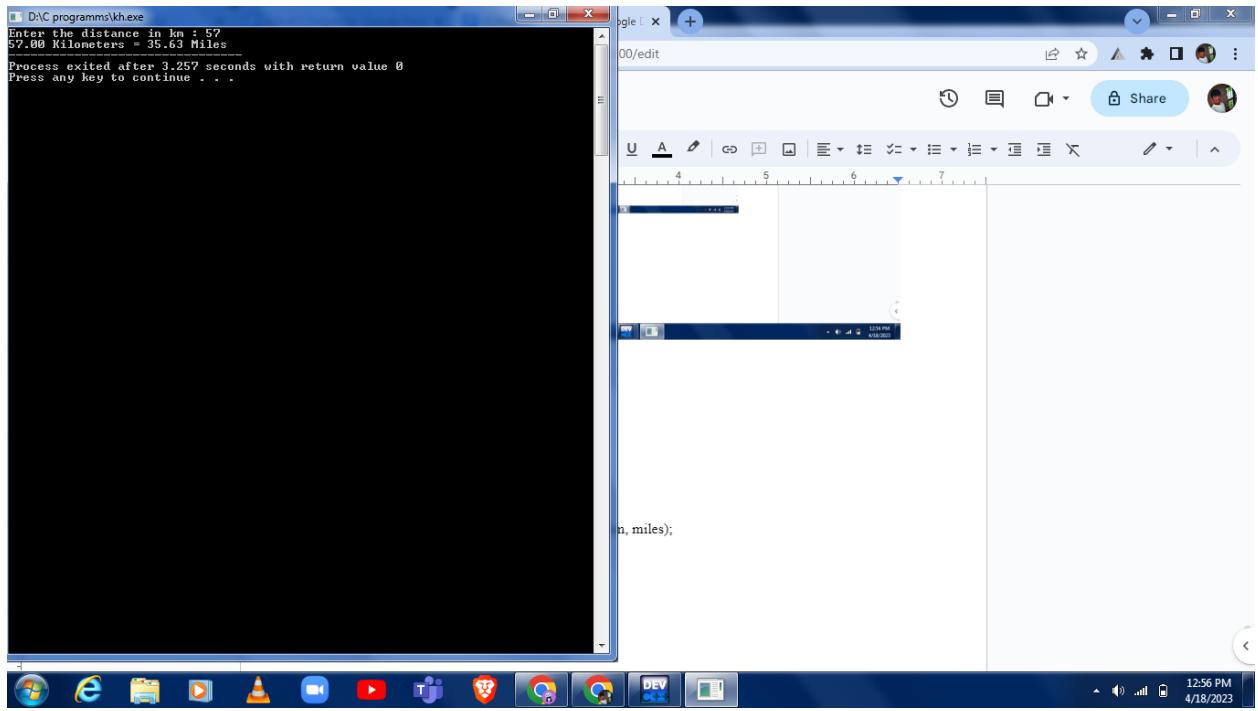
```
#include<stdio.h>
int main()
{
    float mm,feet;
    printf("Enter Length in Feet : ");
    scanf("%f", &feet);
    mm = (feet/3.26)*1000;
    printf("%f Feet in Meter = %.2fmm",feet,mm);
```

}



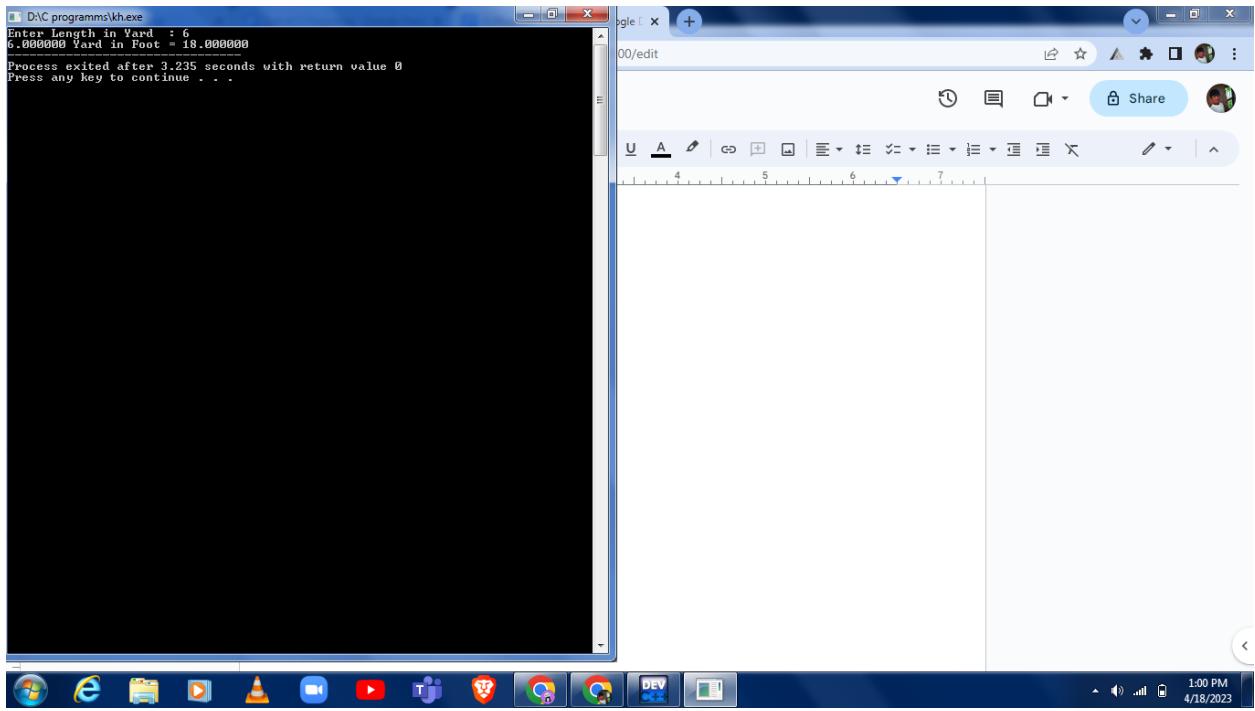
## 26. Convert Kilometer (Km) to Miles (Mi)

```
#include <stdio.h>
int main()
{
    float km, miles;
    printf("Enter the distance in km : ");
    scanf("%f", &km);
    miles = km / 1.6;
    printf("%.2f Kilometers = %.2f Miles", km, miles);
    return 0;
}
```



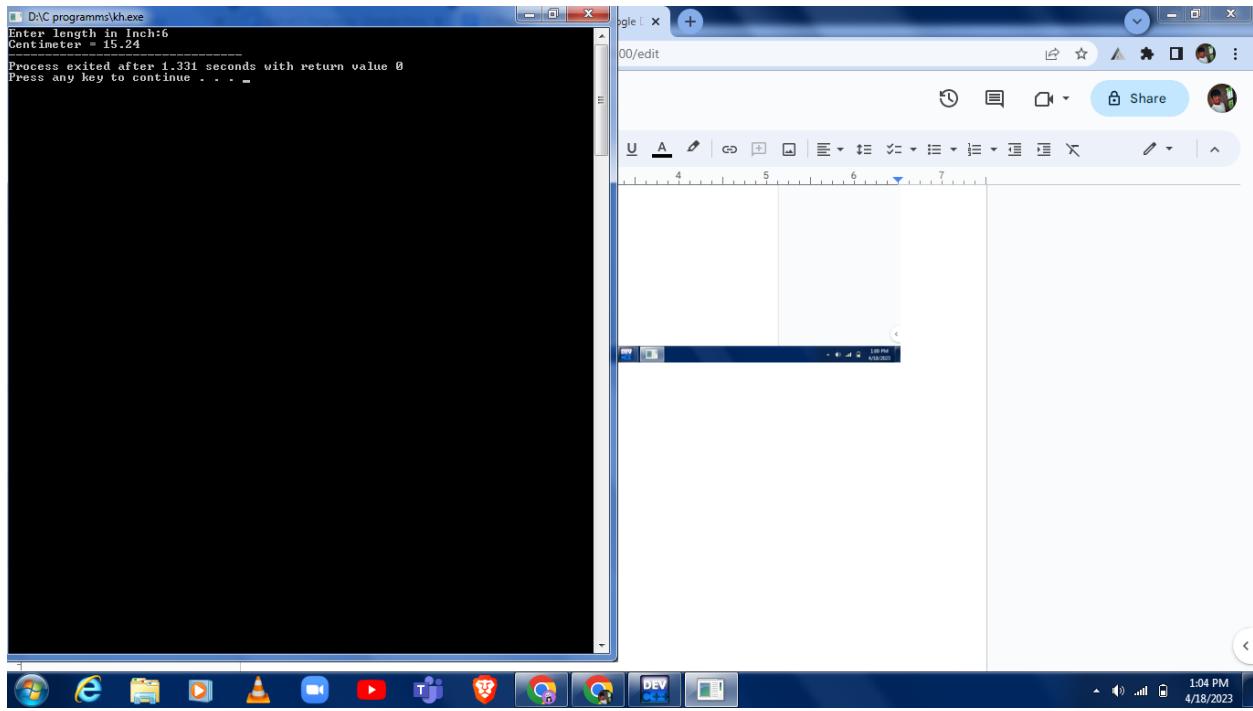
## 27. Convert Yard to Foot

```
#include<stdio.h>
int main()
{
    float yard,foot;
    printf("Enter Length in Yard : ");
    scanf("%f",&yard);
    foot = (3*yard);
    printf("%f Yard in Foot = %f",yard,foot);
}
```



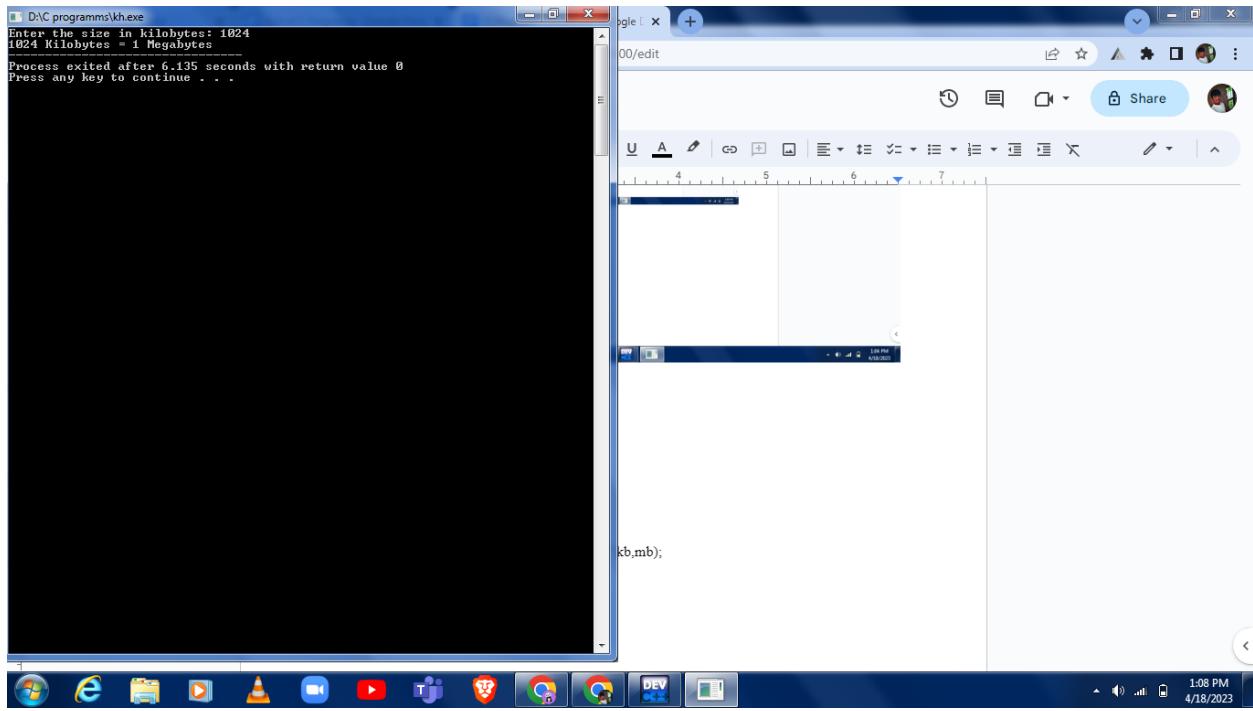
## 28. Convert Inch to Cm

```
#include<stdio.h>
int main()
{
    float inch,cm;
    printf("Enter length in Inch:");
    scanf("%f",&inch);
    cm=inch*2.54;
    printf("Centimeter = %.2f ",cm);
    return 0;
}
```



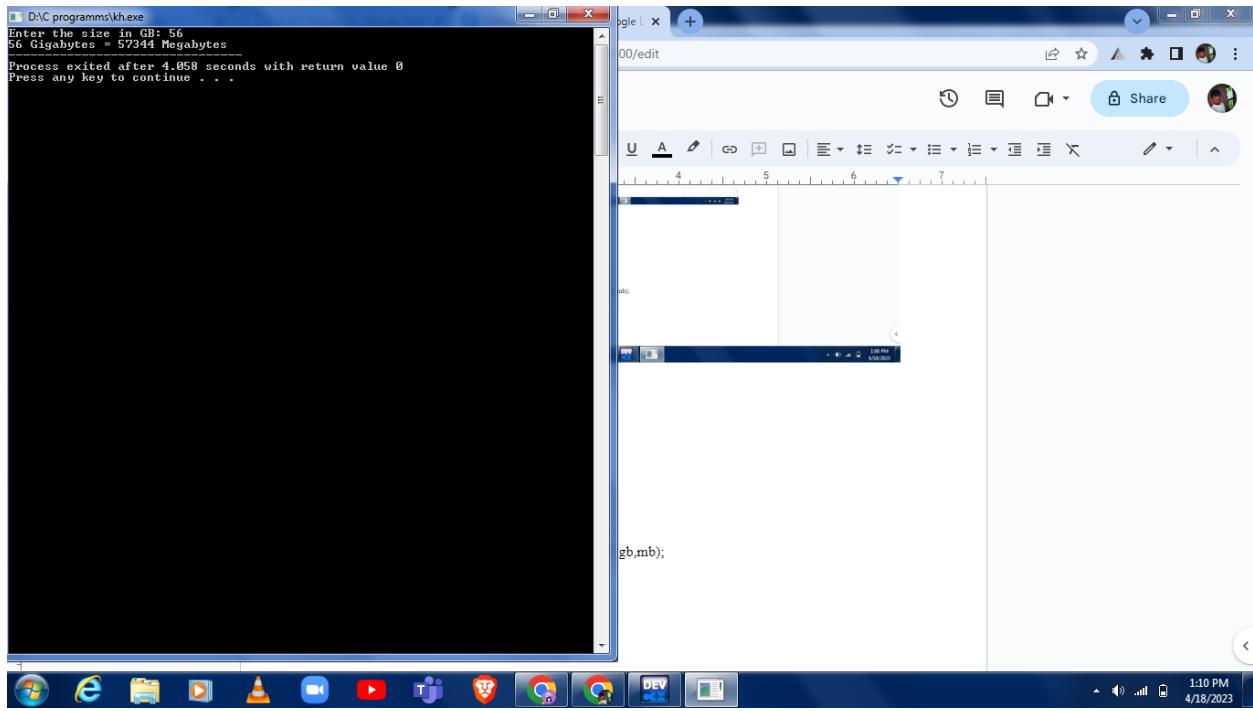
## 29. Convert Kb to Mb

```
#include <stdio.h>
int main()
{
    long kb,mb;
    printf("Enter the size in kilobytes: ");
    scanf("%ld",&kb);
    mb = kb/1024;
    printf("%ld Kilobytes = %ld Megabytes",kb,mb);
    return 0;
}
```



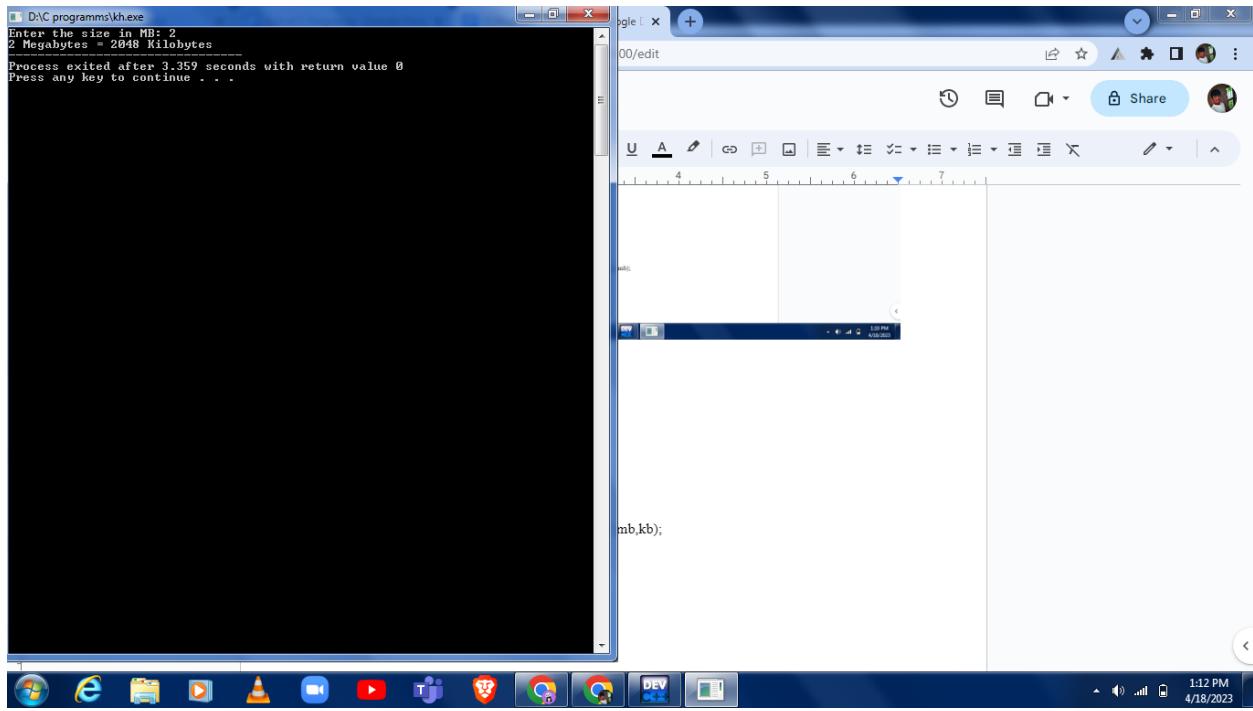
### 30. Convert Gb to Mb

```
#include <stdio.h>
int main()
{
    long mb,gb;
    printf("Enter the size in GB: ");
    scanf("%ld",&gb);
    mb = gb*1024;
    printf("%ld Gigabytes = %ld Megabytes",gb,mb);
    return 0;
}
```



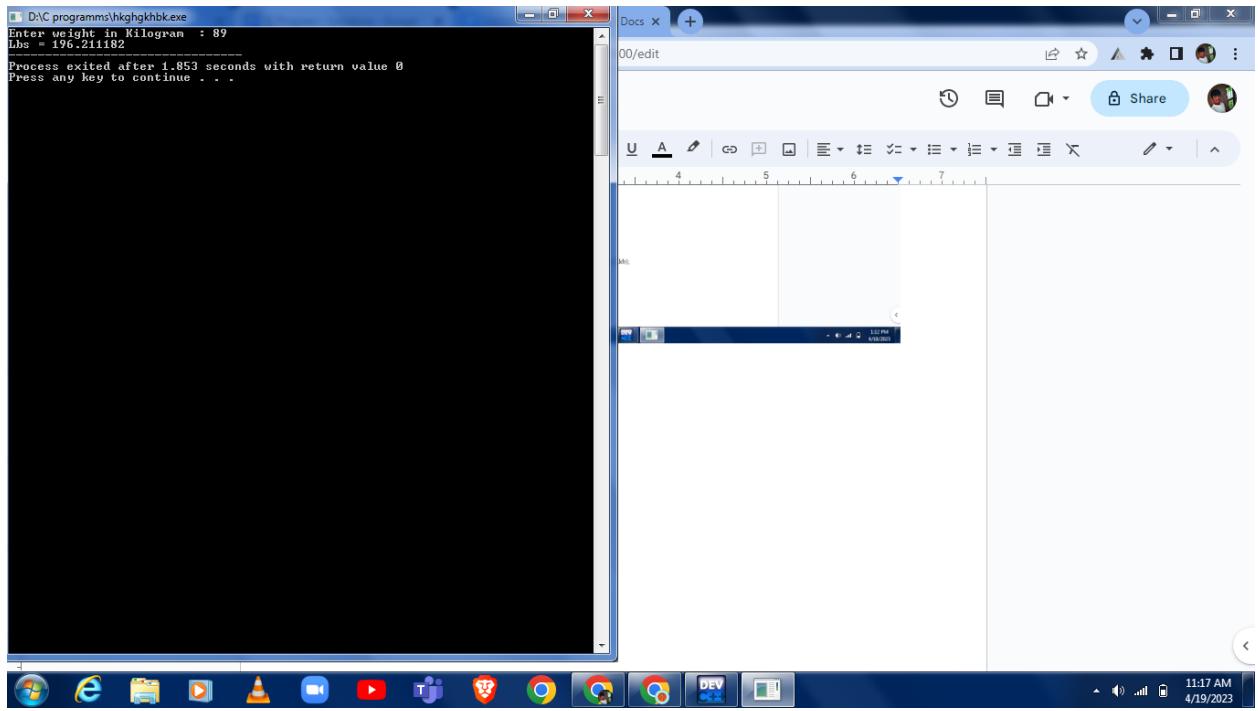
### 31.Convert Mb to Kb

```
#include <stdio.h>
int main()
{
    long mb,kb;
    printf("Enter the size in MB: ");
    scanf("%ld",&mb);
    kb = mb*1024;
    printf("%ld Megabytes = %ld Kilobytes",mb,kb);
    return 0;
}
```



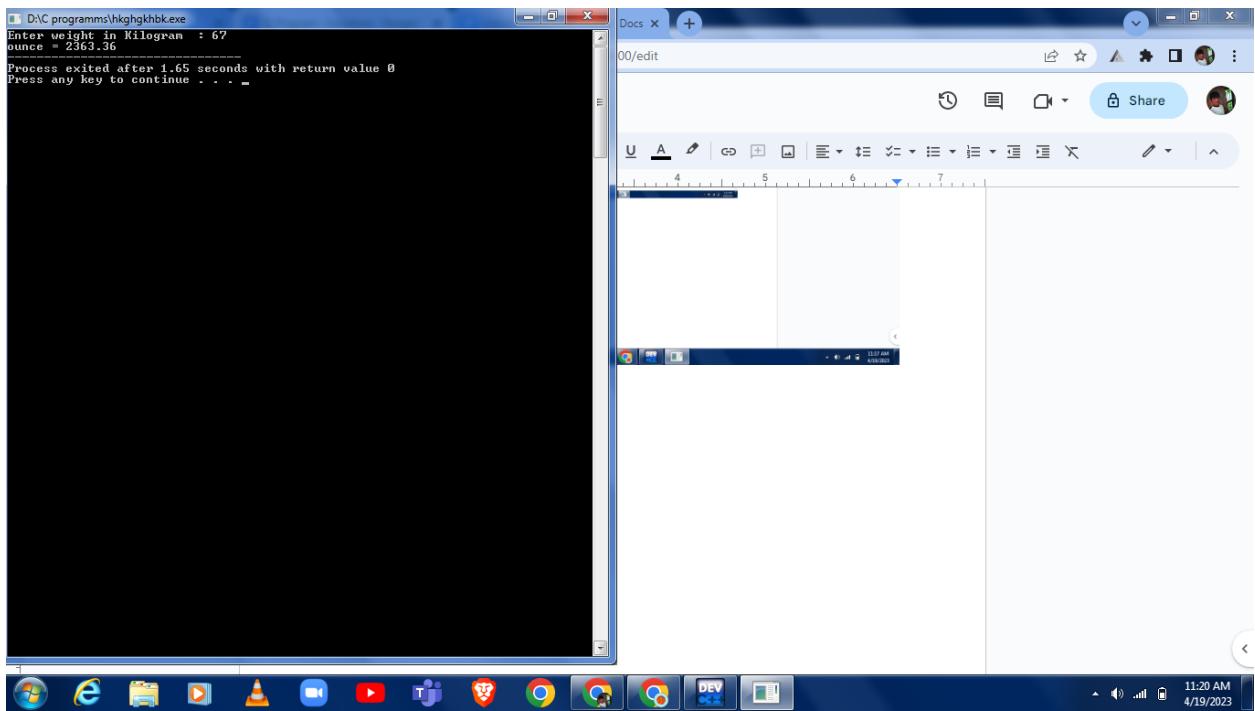
### 32. Convert Kg to lbs

```
#include<stdio.h>
int main()
{
    float kg,lbs;
    printf("Enter weight in Kilogram : ");
    scanf("%f", &kg);
    lbs = kg*2.20462;
    printf("Lbs = %f",lbs);
}
```



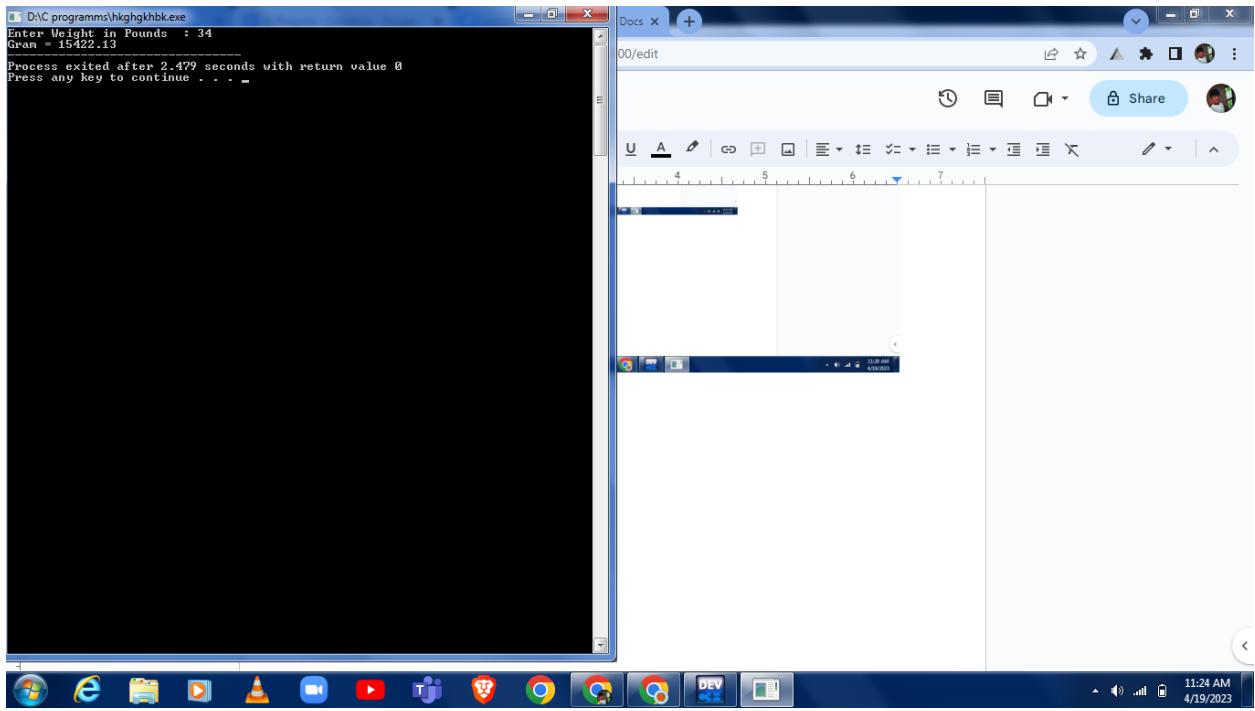
### 33. Convert Kg to Ounce

```
#include<stdio.h>
int main()
{
    float kg,ounce;
    printf("Enter weight in Kilogram : ");
    scanf("%f",&kg);
    ounce = kg*35.274;
    printf("ounce = %.2f",ounce);
}
```



### 34. Convert Pounds to Grams

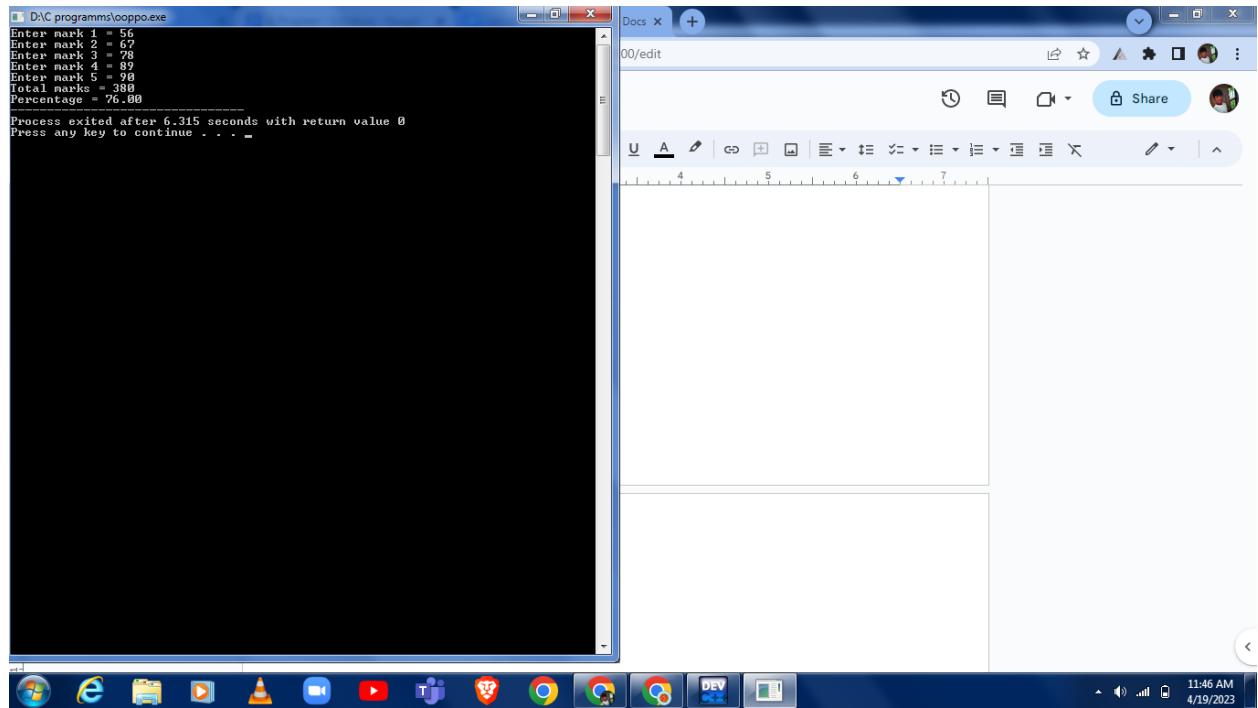
```
#include<stdio.h>
int main()
{
    float pound,gram;
    printf("Enter Weight in Pounds : ");
    scanf("%f",&pound);
    gram = pound*453.592;
    printf("Gram = %.2f",gram );
}
```



### 35.calculate total marks and percentage

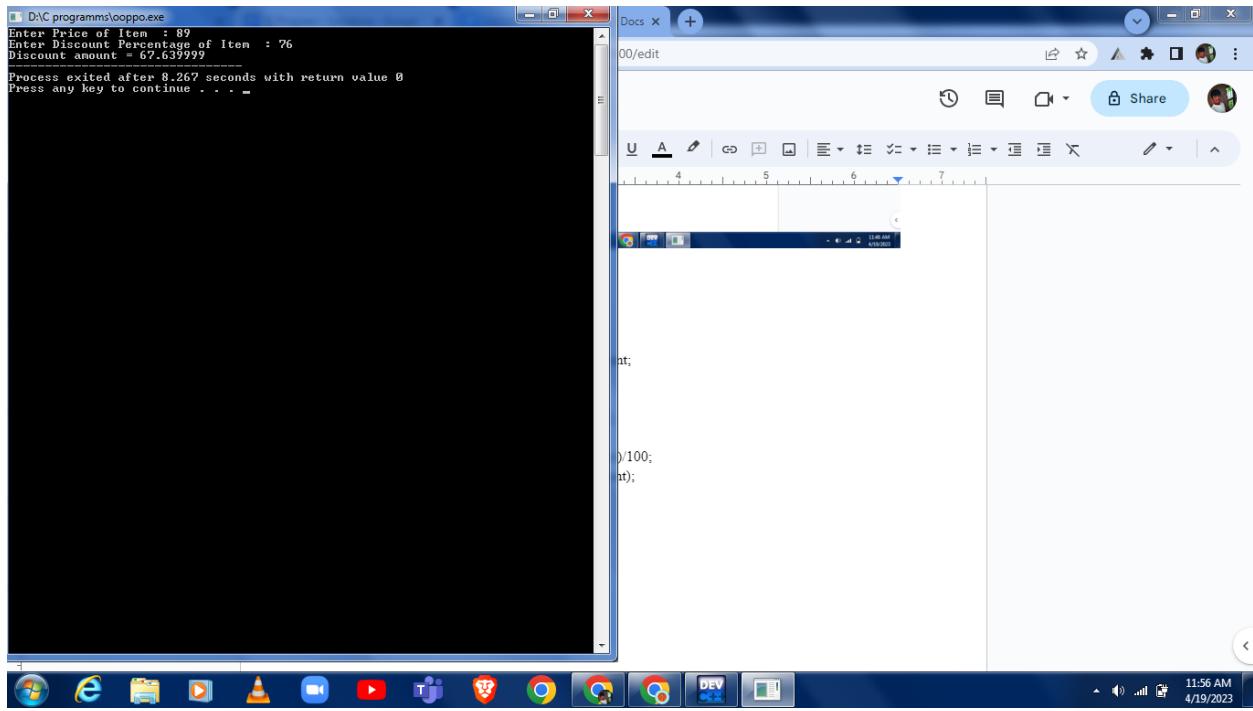
```
#include<stdio.h>
int main()
{
    int mark1,mark2,mark3,mark4,mark5,total;
    float percentage;
    printf("Enter mark 1 = ");
    scanf("%d",&mark1);
    printf("Enter mark 2 = ");
    scanf("%d",&mark2);
    printf("Enter mark 3 = ");
    scanf("%d",&mark3);
    printf("Enter mark 4 = ");
    scanf("%d",&mark4);
    printf("Enter mark 5 = ");
    scanf("%d",&mark5);
    total = mark1+mark2+mark3+mark4+mark5;
    percentage = (total/500.0)*100.0;
    printf("Total marks = %d",total);
    printf("\nPercentage = %.2f",percentage);
    return 0;
```

}



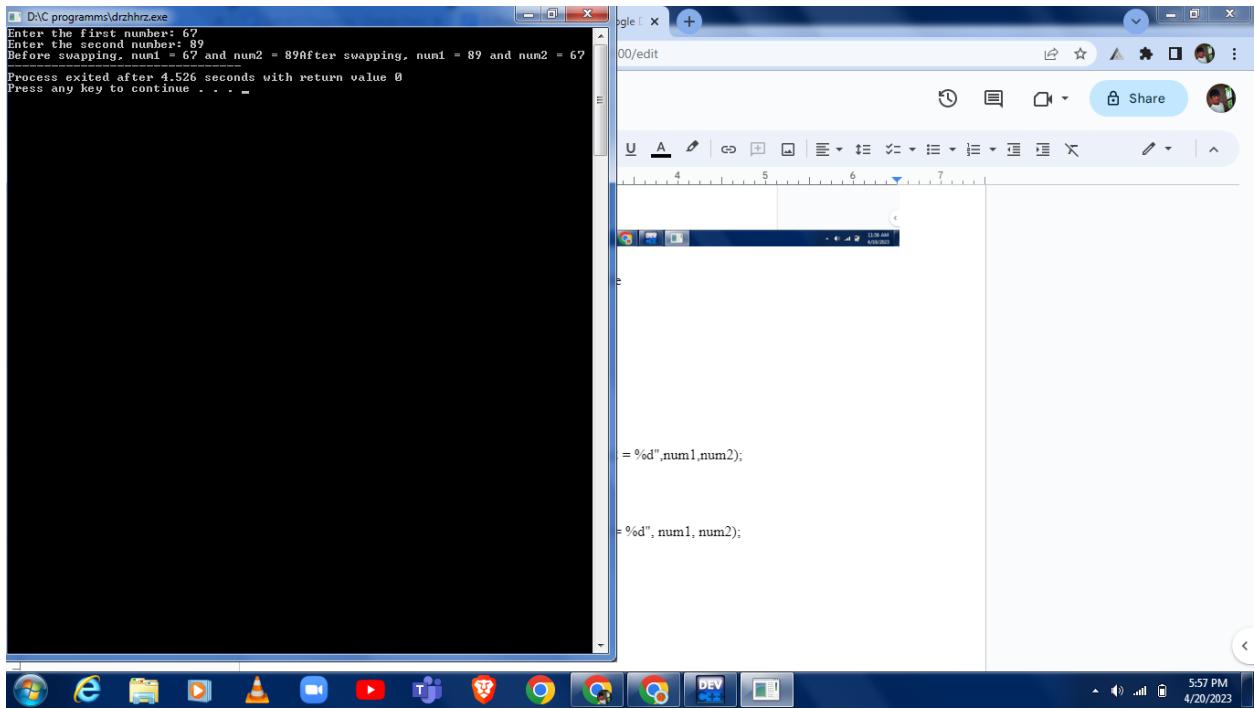
### 36. Calculate Discount Amount

```
#include<stdio.h>
int main()
{
    float price,discount_percentage,discount_amount;
    printf("Enter Price of Item : ");
    scanf("%f", &price);
    printf("Enter Discount Percentage of Item : ");
    scanf("%f", &discount_percentage);
    discount_amount = (discount_percentage*price)/100;
    printf("Discount amount = %f",discount_amount);
}
```



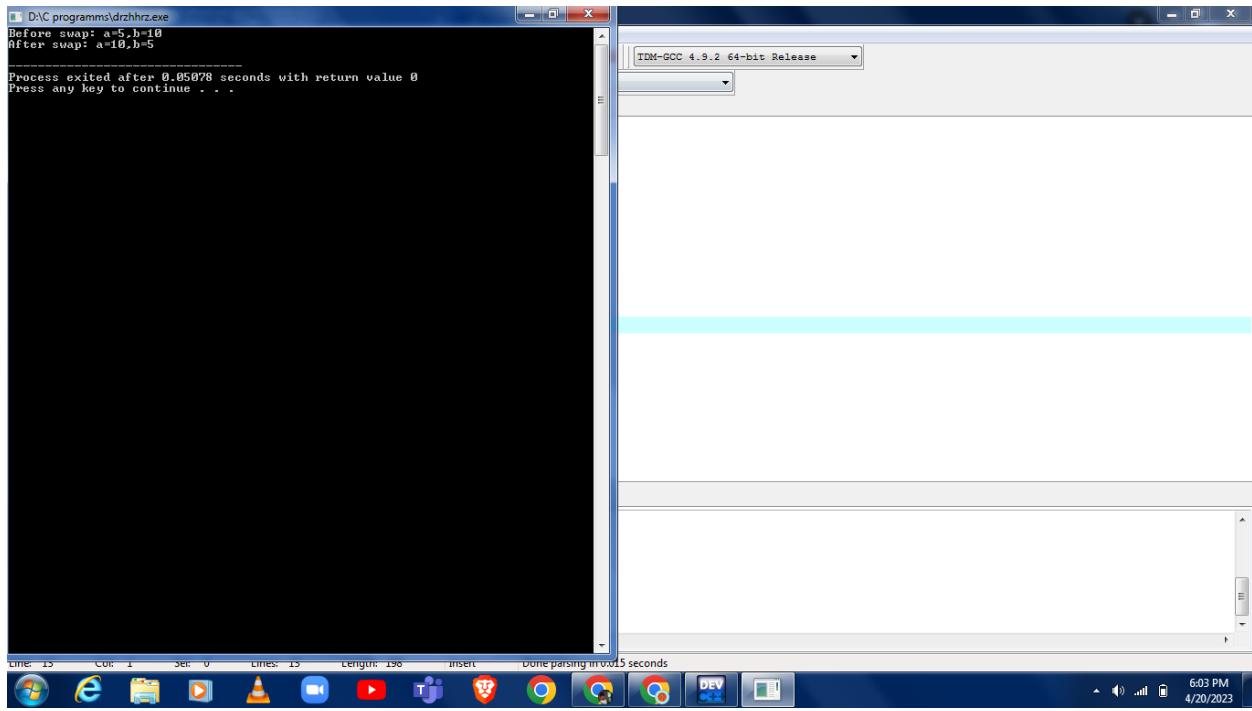
### 37. Swap two numbers using a temporary variable

```
#include <stdio.h>
int main()
{
    int num1,num2,temp;
    printf("Enter the first number: ");
    scanf("%d",&num1);
    printf("Enter the second number: ");
    scanf("%d",&num2);
    printf("Before swapping, num1 = %d and num2 = %d",num1,num2);
    temp = num1;
    num1 = num2;
    num2 = temp;
    printf("After swapping, num1 = %d and num2 = %d", num1, num2);
    return 0;
}
```



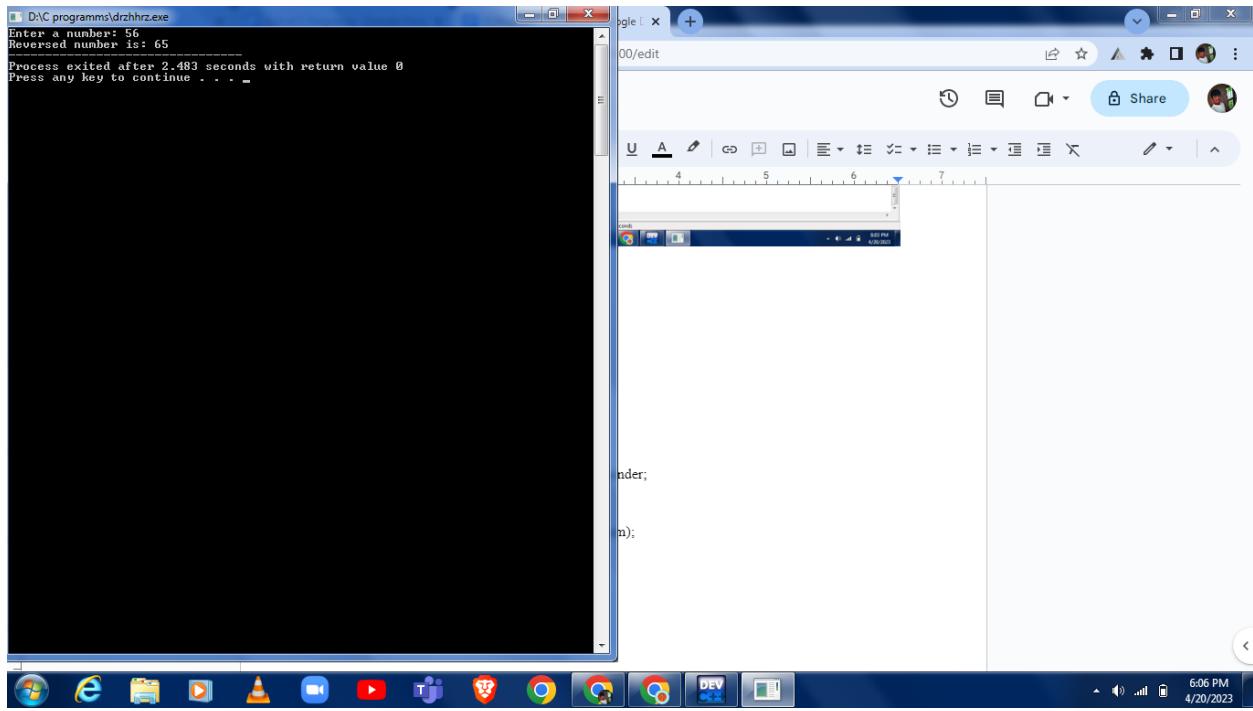
### 38. swap two numbers without using temp variable

```
#include <stdio.h>
int main()
{
    int a=5;
    int b=10;
    printf("Before swap: a=%d,b=%d\n",a,b);
    a=a^b;
    b=a^b;
    a=a^b;
    printf("After swap: a=%d,b=%d\n",a,b);
    return 0;
}
```



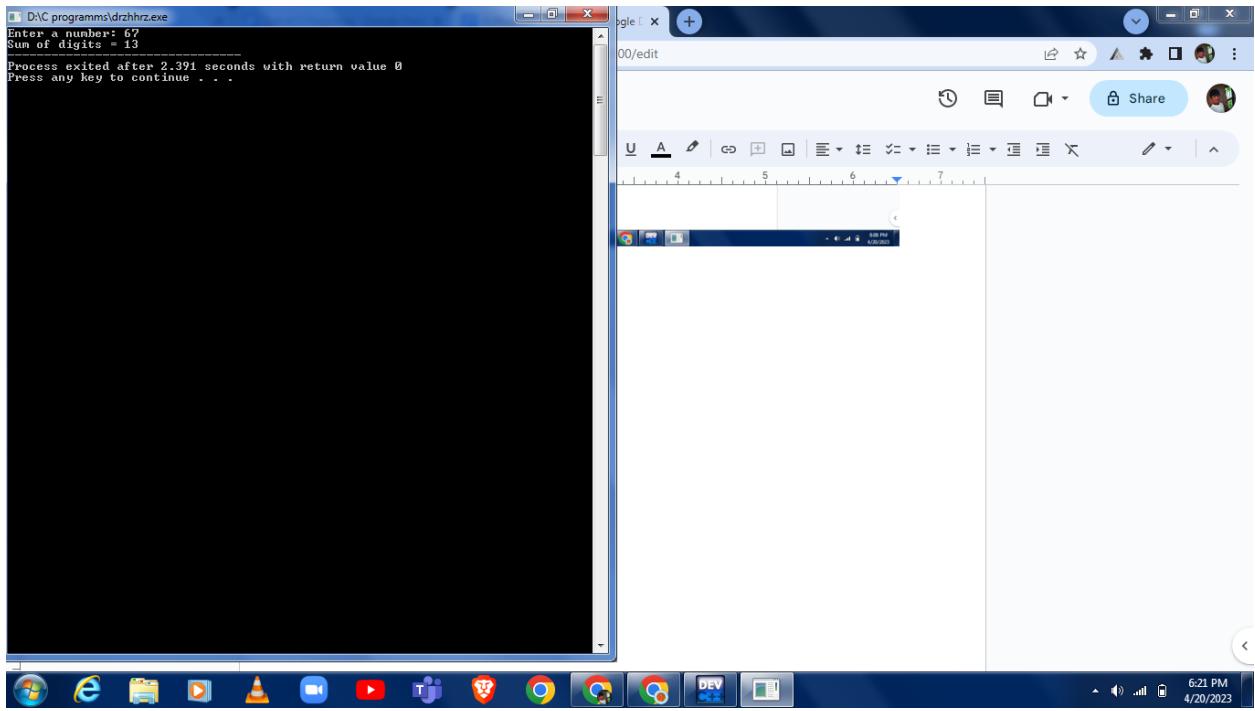
### 39.Reverse digits of entered number

```
#include <stdio.h>
int main()
{
    int num,reversed_num = 0,remainder;
    printf("Enter a number: ");
    scanf("%d", &num);
    while (num != 0)
    {
        remainder = num % 10;
        reversed_num = reversed_num * 10 + remainder;
        num /= 10;
    }
    printf("Reversed number is: %d", reversed_num);
    return 0;
}
```



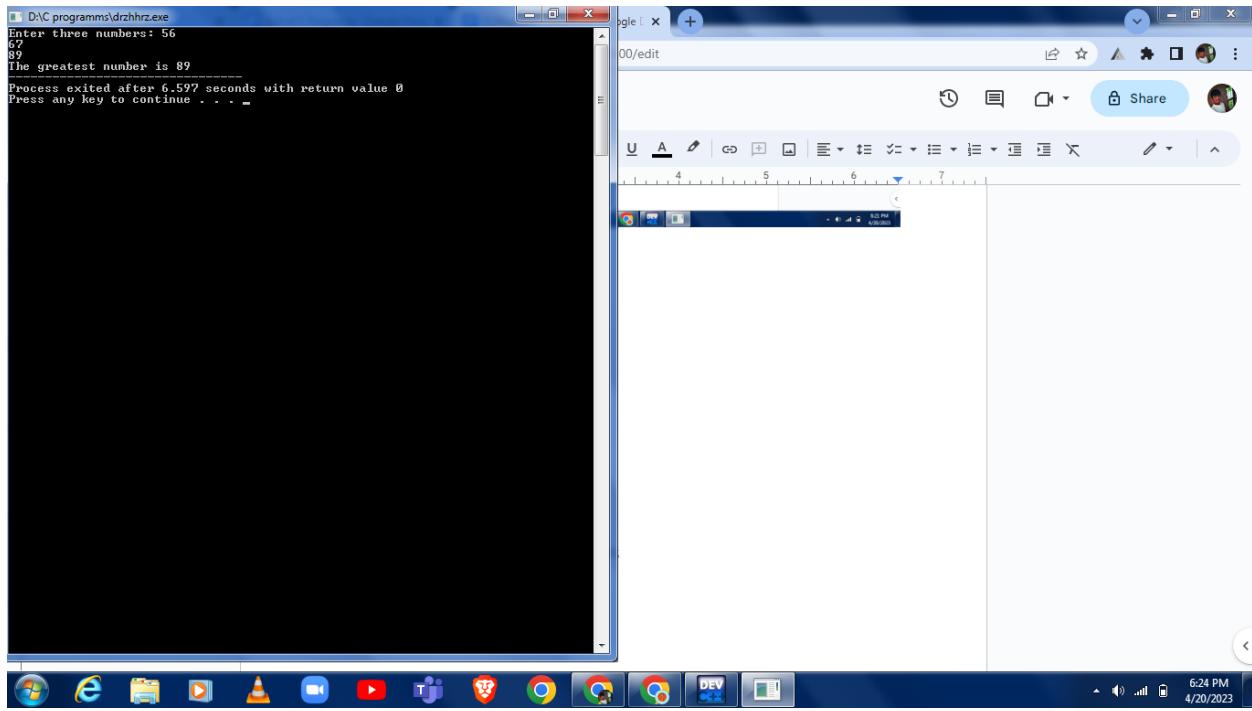
40.Calculate Sum of digits of entered number

```
#include <stdio.h>
int main()
{
    int number,digit,sum = 0;
    printf("Enter a number: ");
    scanf("%d",&number);
    while(number != 0)
    {
        digit = number % 10;
        sum += digit;
        number /= 10;
    }
    printf("Sum of digits = %d", sum);
    return 0;
}
```



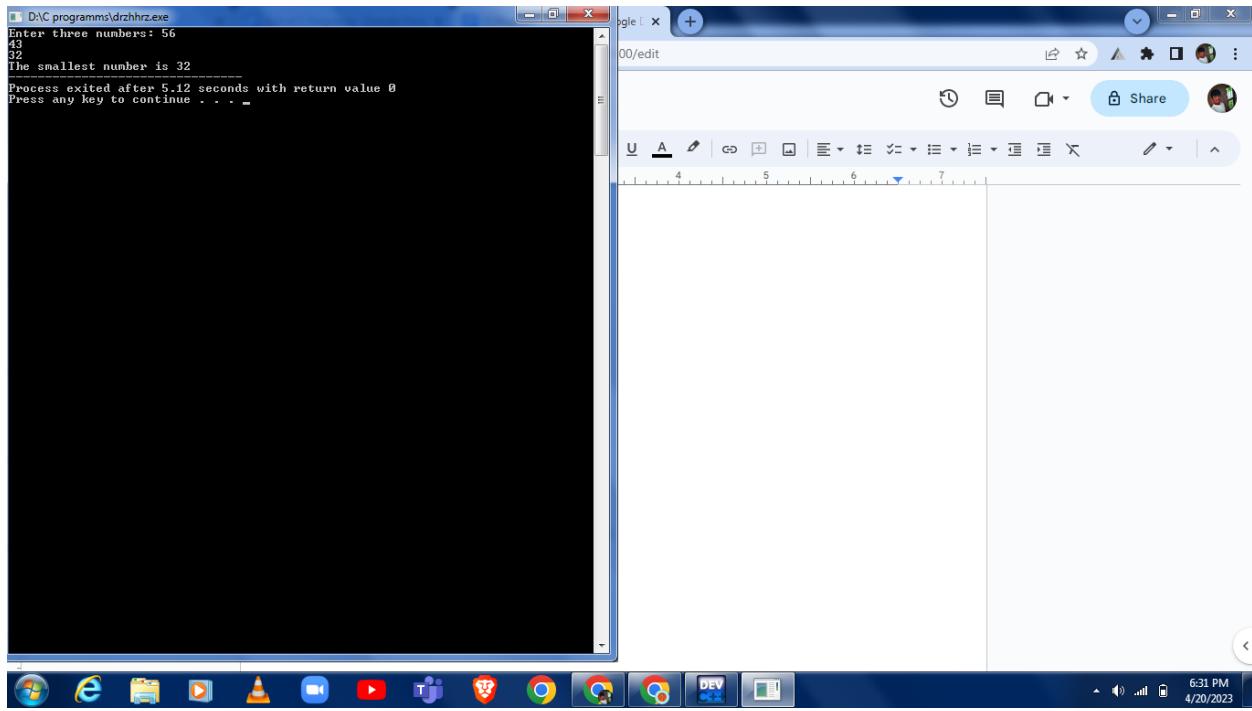
#### 41. Greatest among three numbers

```
#include <stdio.h>
int main()
{
    int a, b, c;
    printf("Enter three numbers: ");
    scanf("%d%d%d", &a, &b, &c);
    int max = a;
    if (b > max)
    {
        max = b;
    }
    if (c > max)
    {
        max = c;
    }
    printf("The greatest number is %d", max);
    return 0;
}
```



42. Find Smallest among 3 numbers.

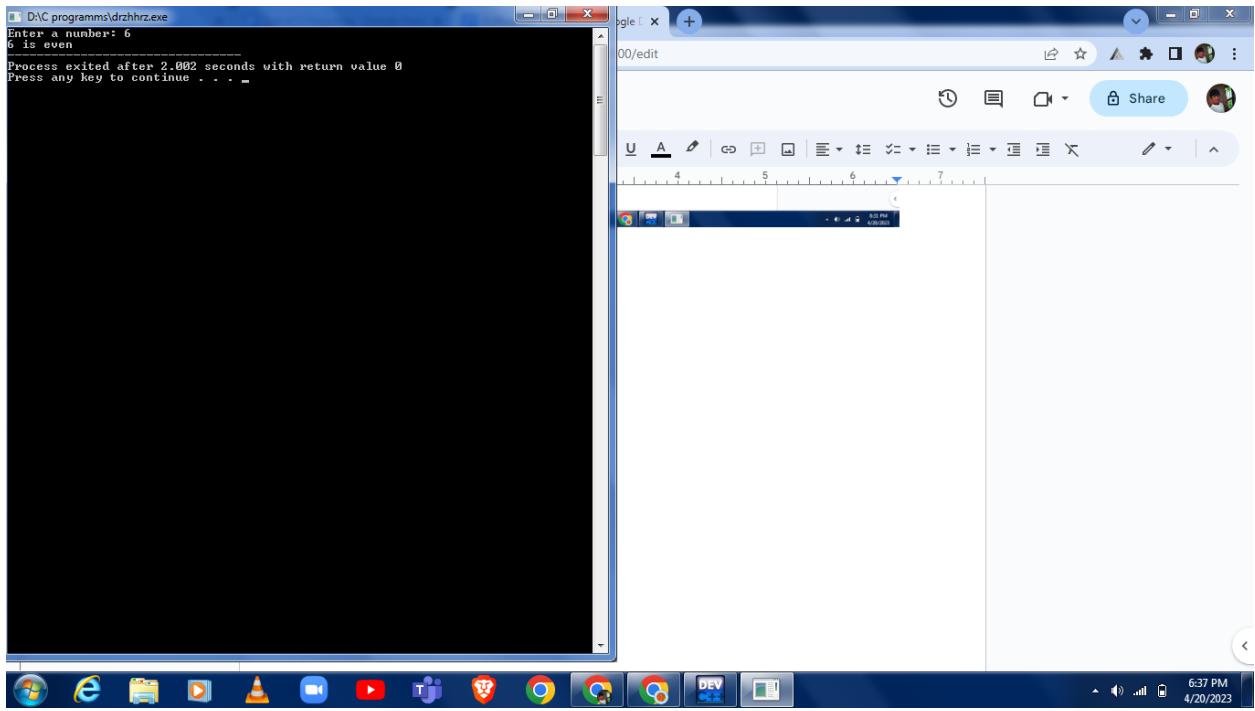
```
#include <stdio.h>
int main()
{
    int a,b,c,smallest;
    printf("Enter three numbers: ");
    scanf("%d%d%d",&a,&b,&c);
    if(a<b && a<c)
    {
        smallest = a;
    } else if(b < c)
    {
        smallest = b;
    } else
    {
        smallest = c;
    }
    printf("The smallest number is %d", smallest);
    return 0;
}
```



43.find even or odd

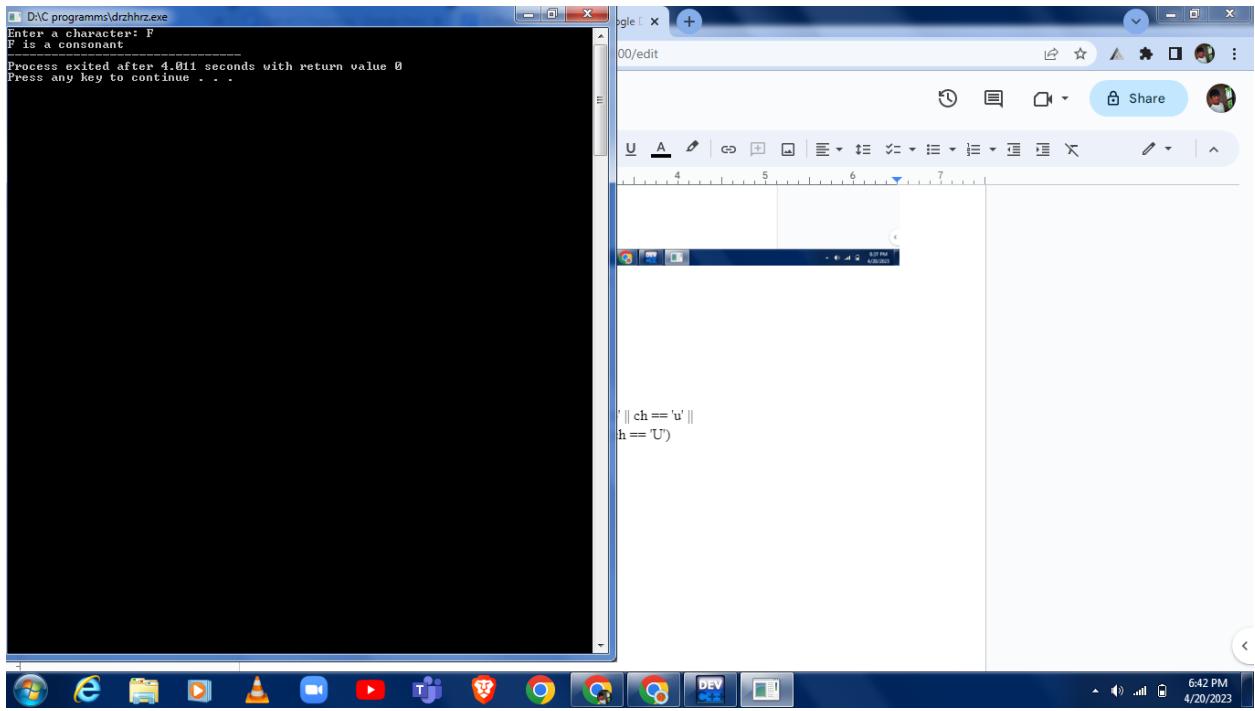
```
#include <stdio.h>
int main()
{
    int num;
    printf("Enter a number: ");
    scanf("%d",&num);
    if (num % 2 == 0)
    {
        printf("%d is even",num);
    }
    else
    {
        printf("%d is odd",num);
    }

    return 0;
}
```



#### 44. Check Entered char is a Vowel or Consonant

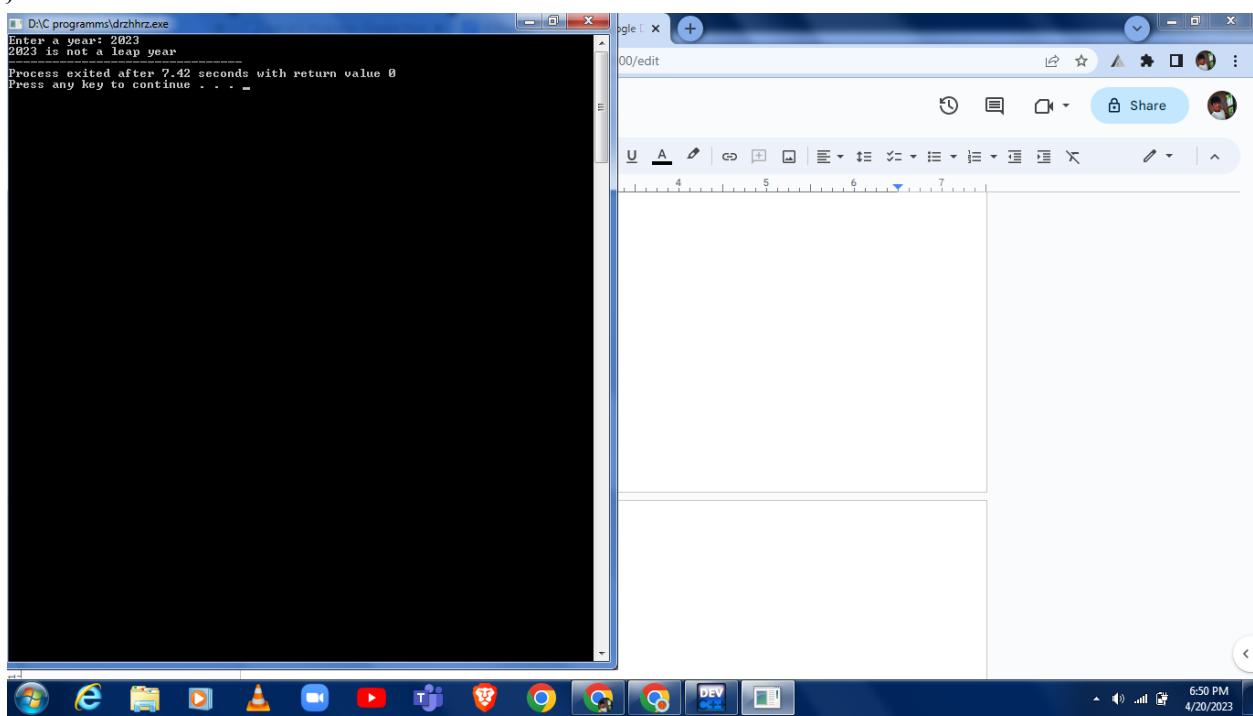
```
#include <stdio.h>
int main()
{
    char ch;
    printf("Enter a character: ");
    scanf("%c",&ch);
    if(ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u' ||
       ch == 'A' || ch == 'E' || ch == 'I' || ch == 'O' || ch == 'U')
    {
        printf("%c is a vowel",ch);
    } else
    {
        printf("%c is a consonant",ch);
    }
    return 0;
}
```



#### 45. Check year is leap or not

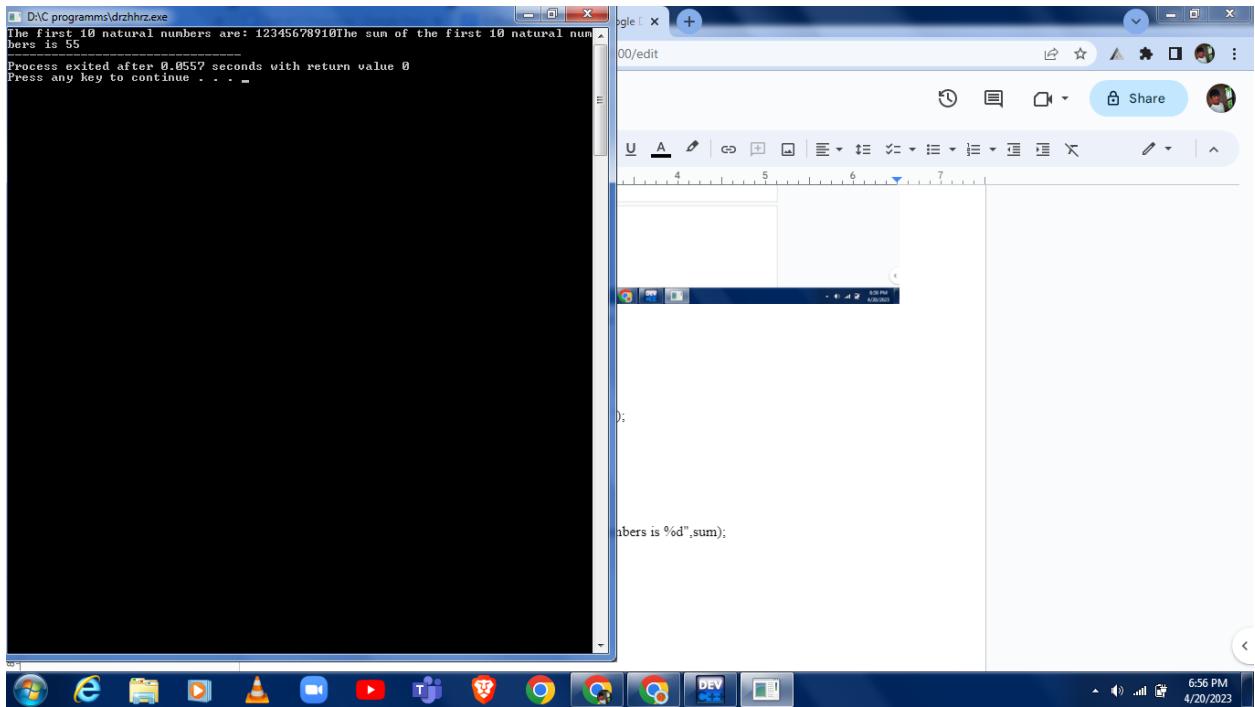
```
#include <stdio.h>
int main()
{
    int year;
    printf("Enter a year: ");
    scanf("%d",&year);
    if (year % 4 == 0)
    {
        if (year % 100 == 0)
        {
            if (year % 400 == 0)
                printf("%d is a leap year",year);
            else
                printf("%d is not a leap year",year);
        }
        else
            printf("%d is a leap year",year);
    }
    else
        printf("%d is not a leap year",year);
    return 0;
```

```
}
```



46. Display 1st 10 natural numbers and their sum

```
#include <stdio.h>
int main()
{
    int i, sum = 0;
    printf("The first 10 natural numbers are: ");
    for (i = 1;i <= 10;i++)
    {
        printf("%d",i);
        sum += i;
    }
    printf("The sum of the first 10 natural numbers is %d",sum);
    return 0;
}
```



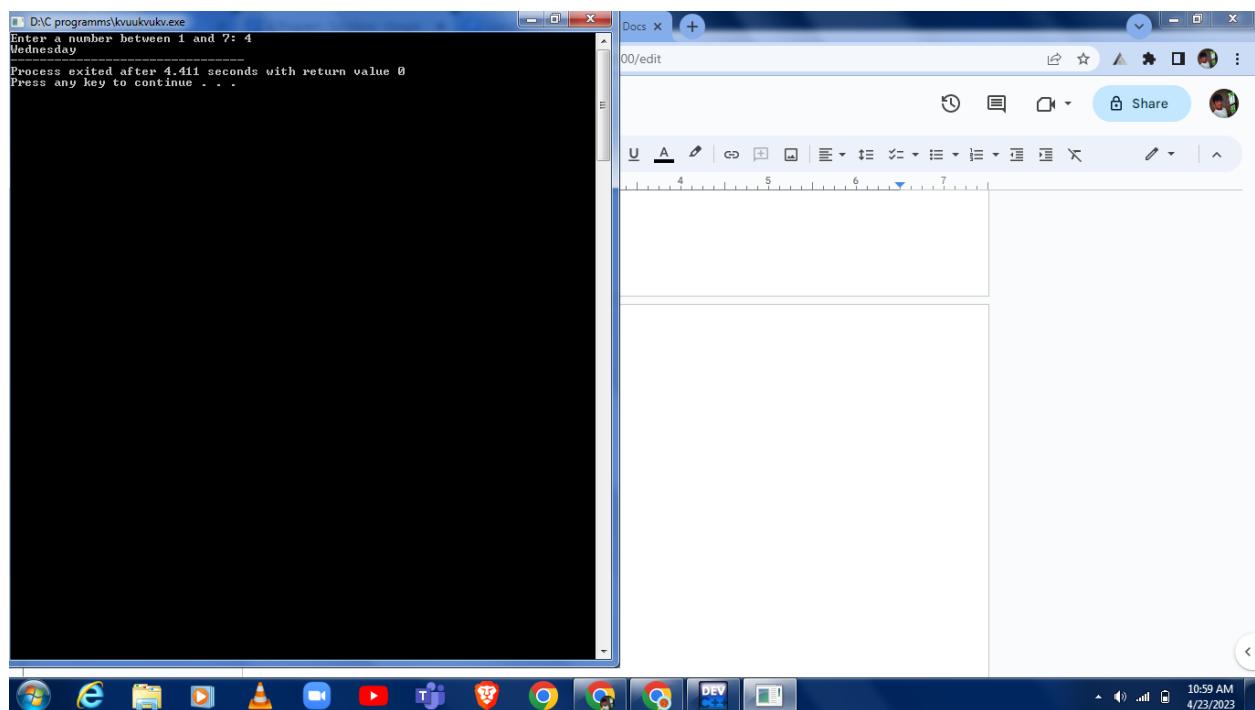
#### 47. Display day of week using switch case

```
#include <stdio.h>
int main()
{
    int day;
    printf("Enter a number between 1 and 7: ");
    scanf("%d",&day);
    switch(day)
    {
        case 1:
            printf("Sunday");
            break;
        case 2:
            printf("Monday");
            break;
        case 3:
            printf("Tuesday");
            break;
        case 4:
            printf("Wednesday");
            break;
        case 5:
            printf("Thursday");
```

```

        break;
case 6:
    printf("Friday");
    break;
case 7:
    printf("Saturday");
    break;
}
return 0;
}

```



48. Check entered number is positive or negative

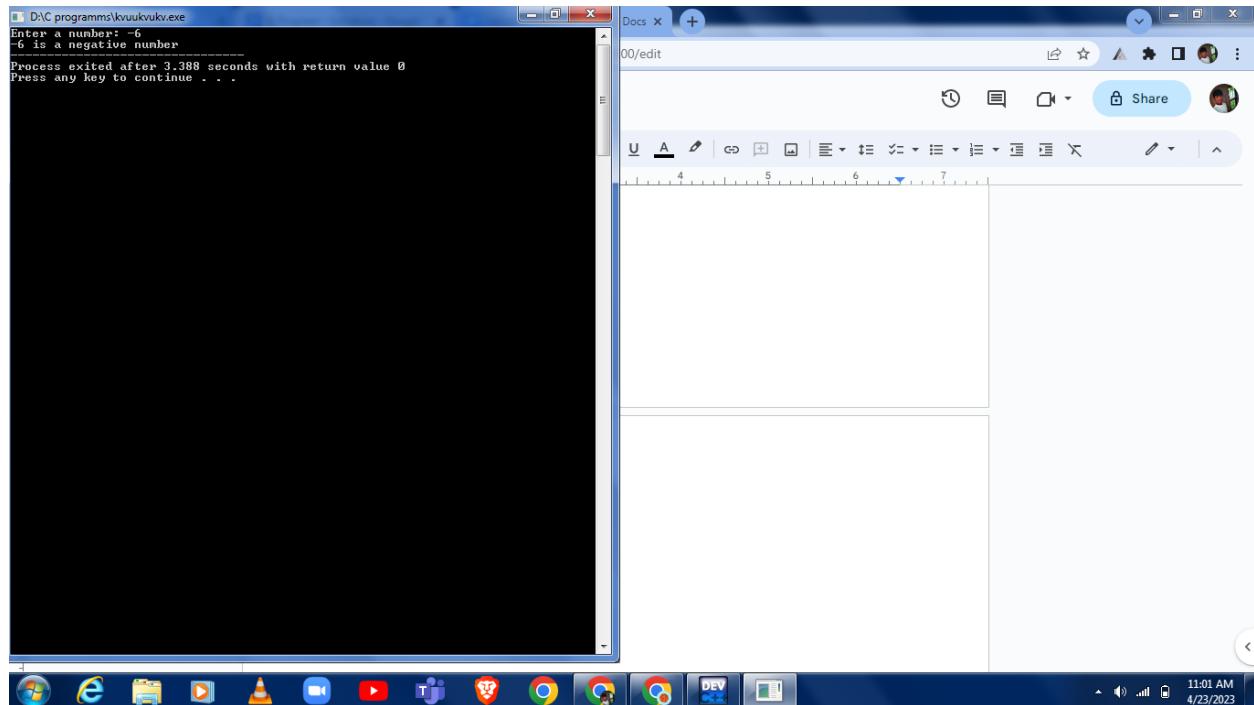
```

#include <stdio.h>

int main()
{
    int num;
    printf("Enter a number: ");
    scanf("%d",&num);
    if (num >= 0)
    {
        printf("%d is a positive number",num);
    } else
    {

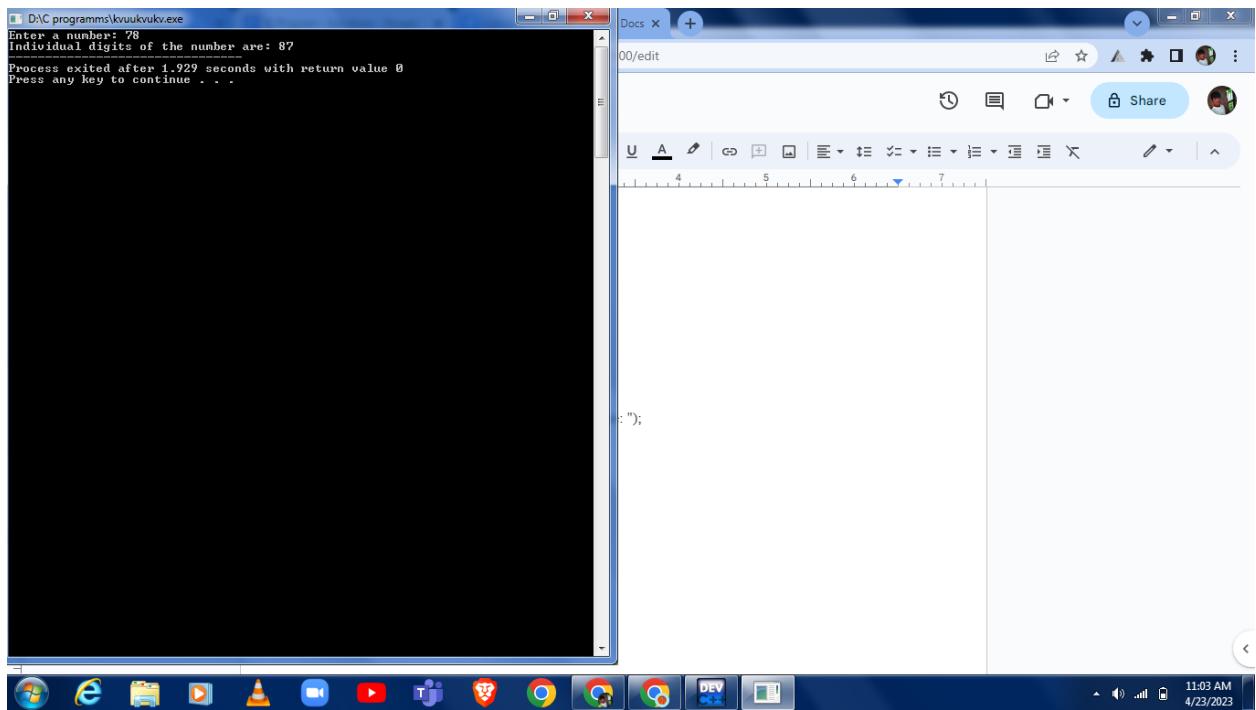
```

```
    printf("%d is a negative number",num);  
}  
    return 0;  
}
```



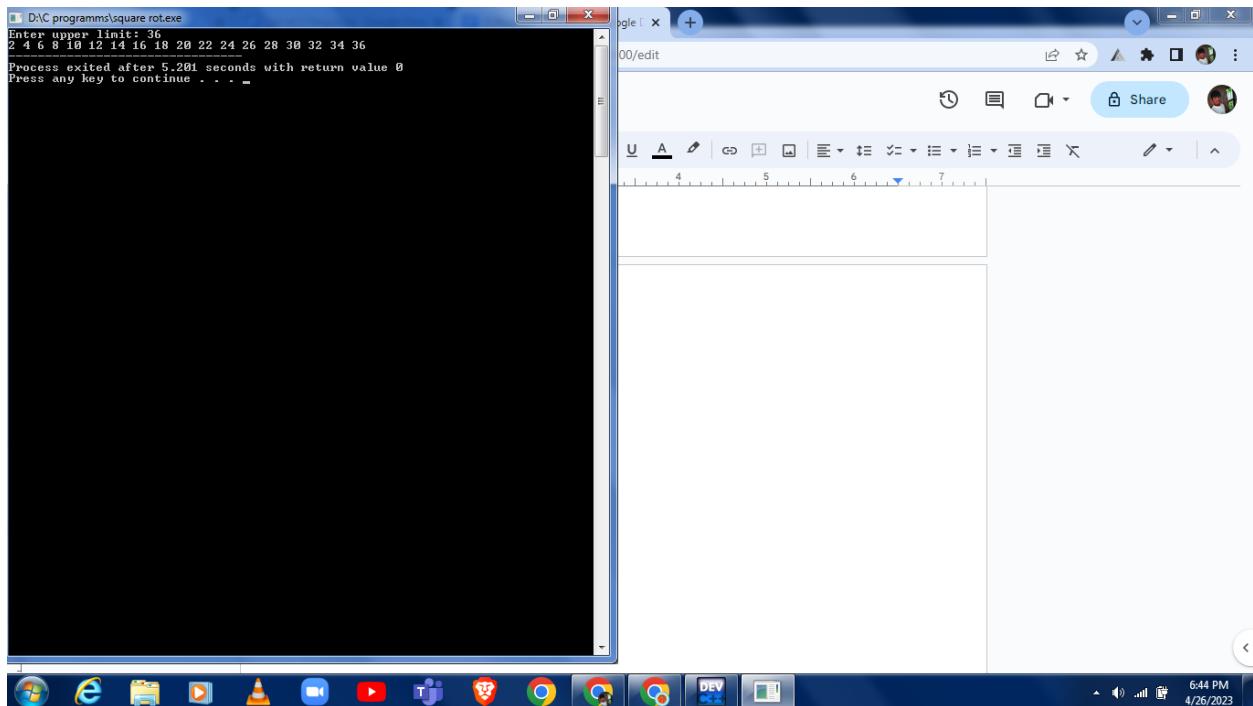
49. Print Individual digits of entered number

```
#include <stdio.h>
int main()
{
    int num,digit;
    printf("Enter a number: ");
    scanf("%d",&num);
    printf("Individual digits of the number are: ");
    while (num > 0)
    {
        digit = num % 10;
        printf("%d",digit);
        num /= 10;
    }
    return 0;
}
```



50.Print even numbers 2 4 6 8 10 ...

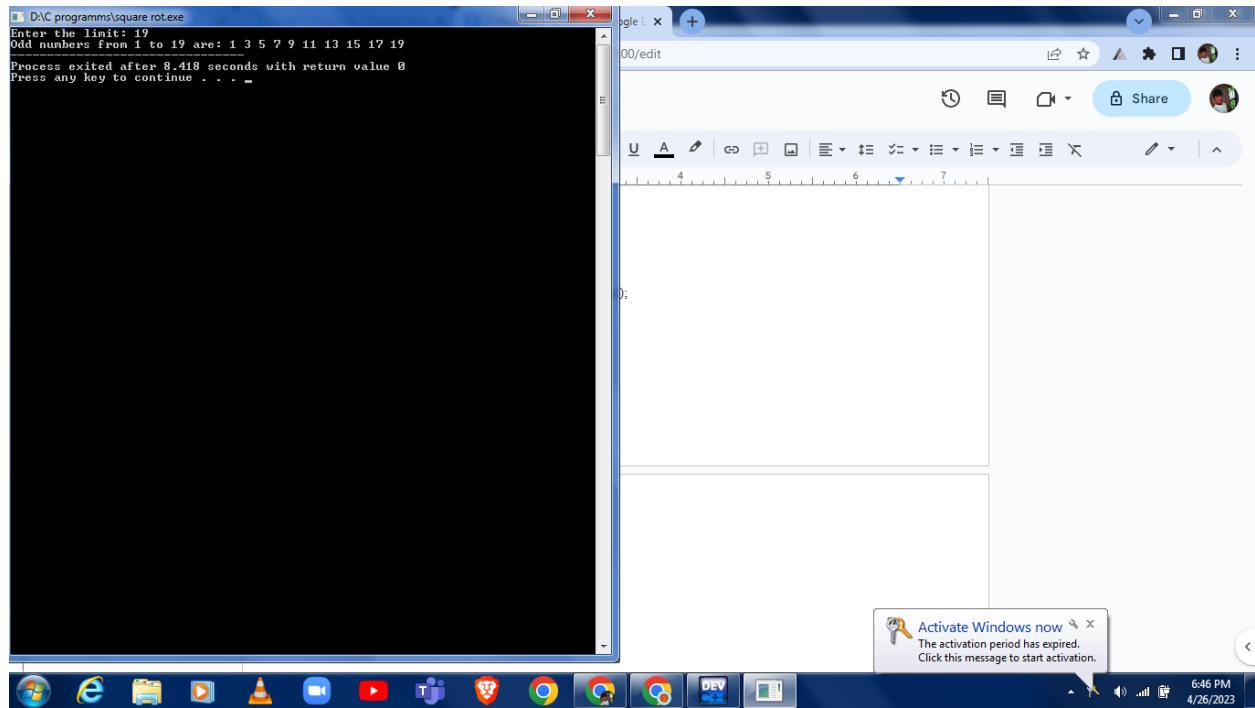
```
#include <stdio.h>
int main()
{
    int limit;
    printf("Enter upper limit: ");
    scanf("%d",&limit);
    for (int i = 2; i <= limit; i += 2)
    {
        printf("%d", i);
    }
    return 0;
}
```



51.Print odd numbers 1 3 5 7 9 ...

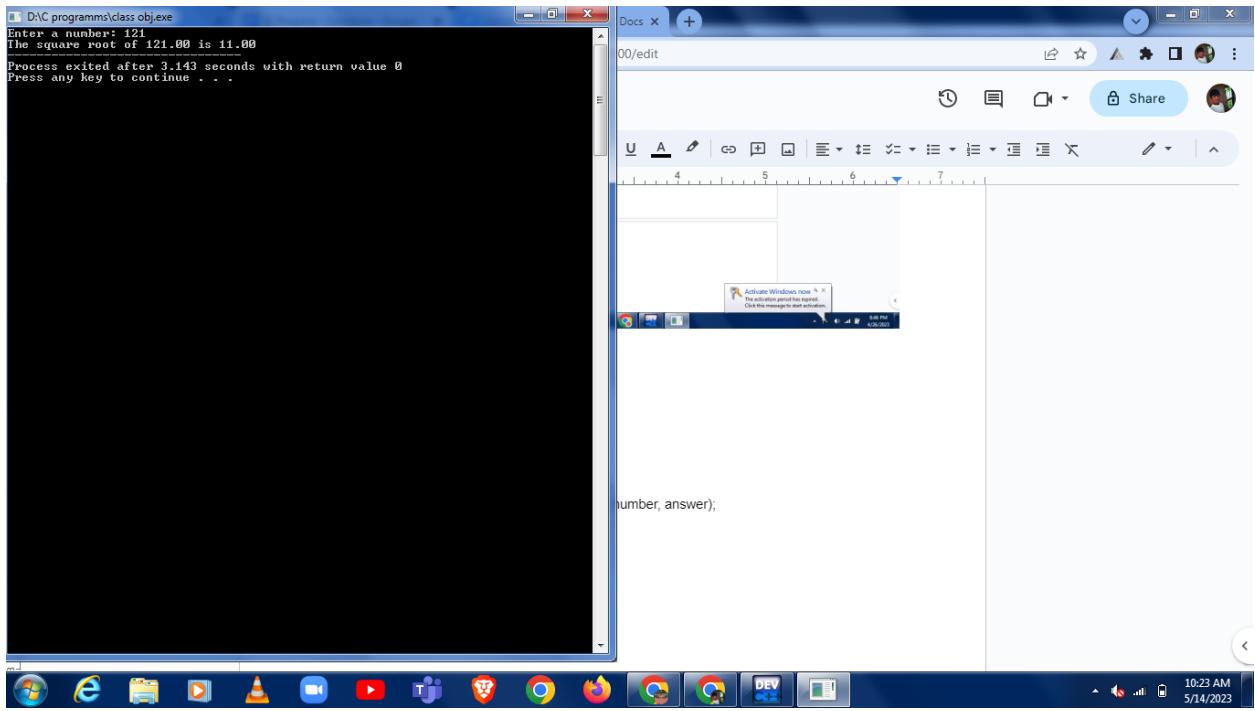
```
#include <stdio.h>
int main()
{
    int limit, i;
    printf("Enter the limit: ");
    scanf("%d",&limit);
    printf("Odd numbers from 1 to %d are: ", limit);
    for(i=1; i<=limit; i+=2)
    {
        printf("%d ", i);
    }
}
```

```
    return 0;  
}
```



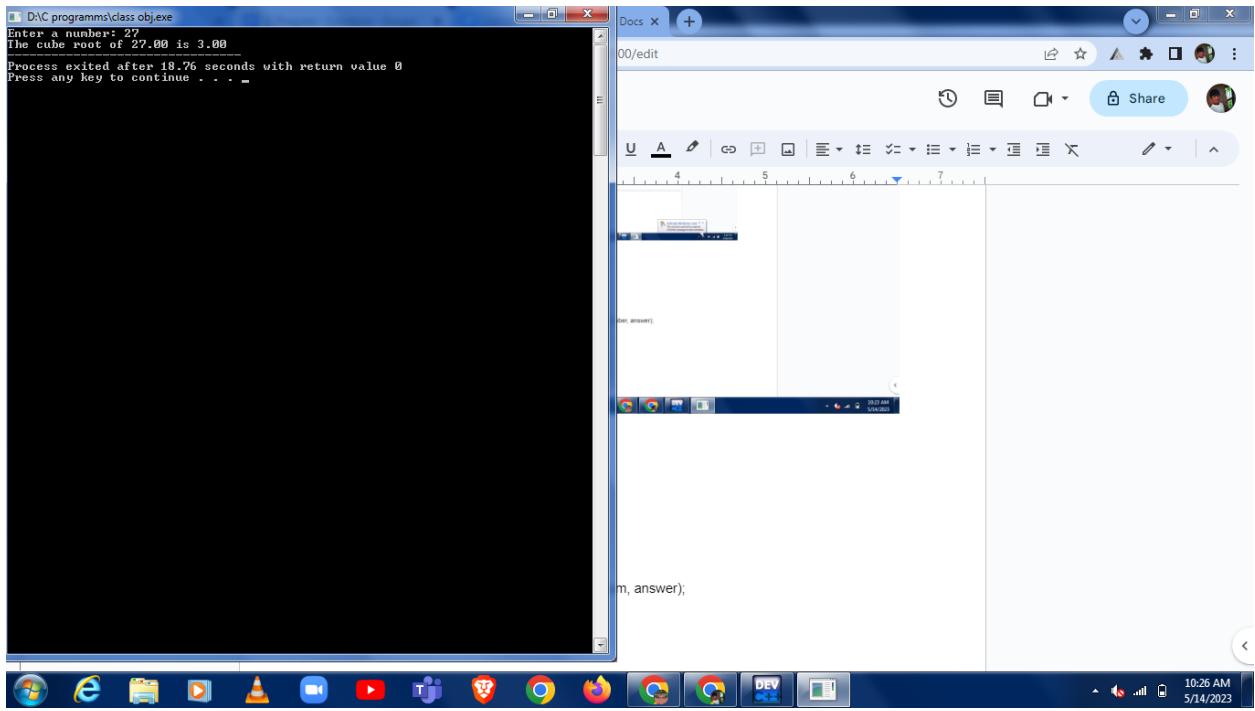
## 52. Find square root of a number

```
#include <stdio.h>  
#include <math.h>  
int main()  
{  
    double number, answer;  
    printf("Enter a number: ");  
    scanf("%lf", &number);  
    answer = sqrt(number);  
    printf("The square root of %.2lf is %.2lf", number, answer);  
    return 0;  
}
```



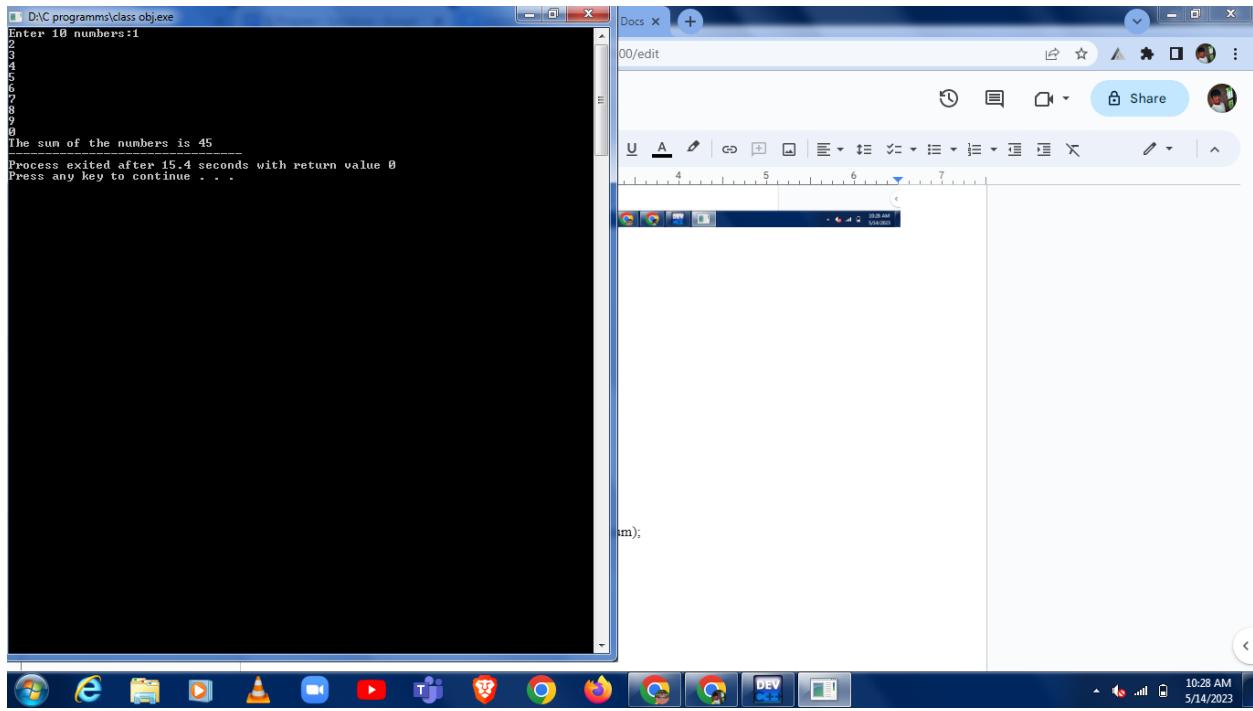
53.Find cube root of a number

```
#include <stdio.h>
#include <math.h>
int main()
{
    double num,answer;
    printf("Enter a number: ");
    scanf("%lf", &num);
    answer = cbrt(num);
    printf("The cube root of %.2lf is %.2lf", num, answer);
    return 0;
}
```



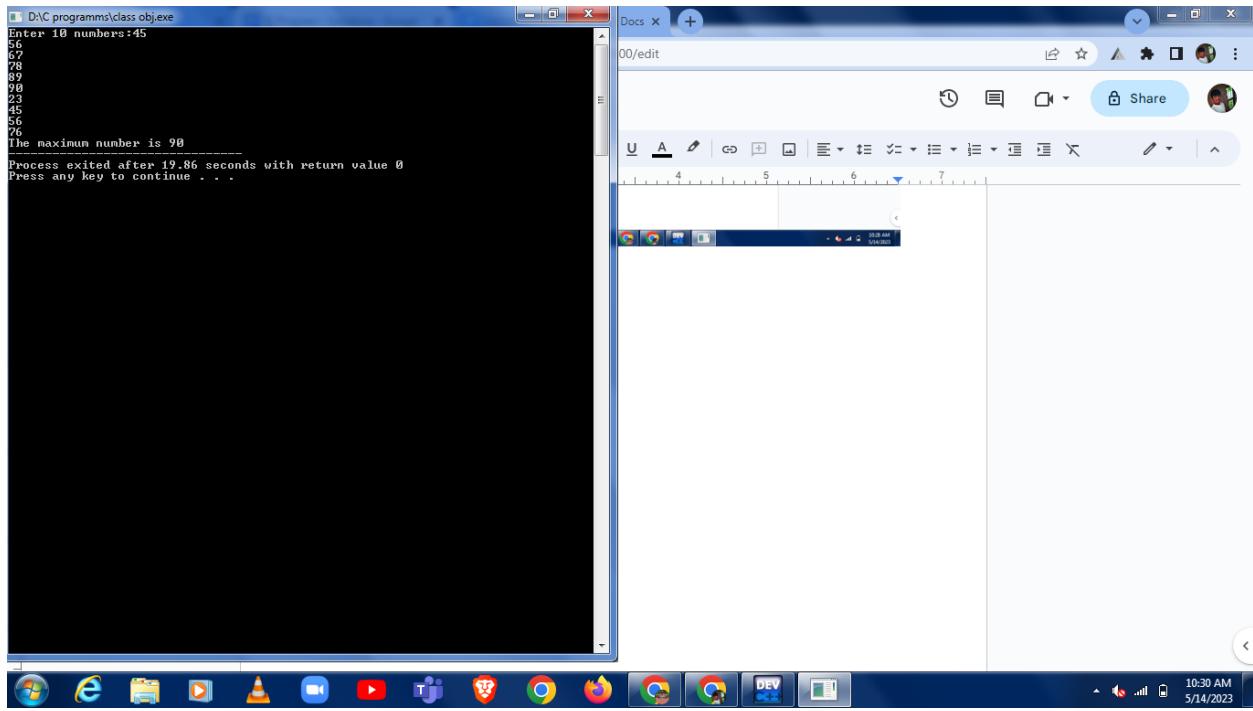
#### 54. Add 10 numbers using array

```
#include <stdio.h>
int main()
{
    int numbers[10];
    int sum = 0;
    printf("Enter 10 numbers:");
    for (int i=0;i<10;i++)
    {
        scanf("%d",&numbers[i]);
    }
    for (int i=0;i<10;i++)
    {
        sum += numbers[i];
    }
    printf("The sum of the numbers is %d", sum);
    return 0;
}
```



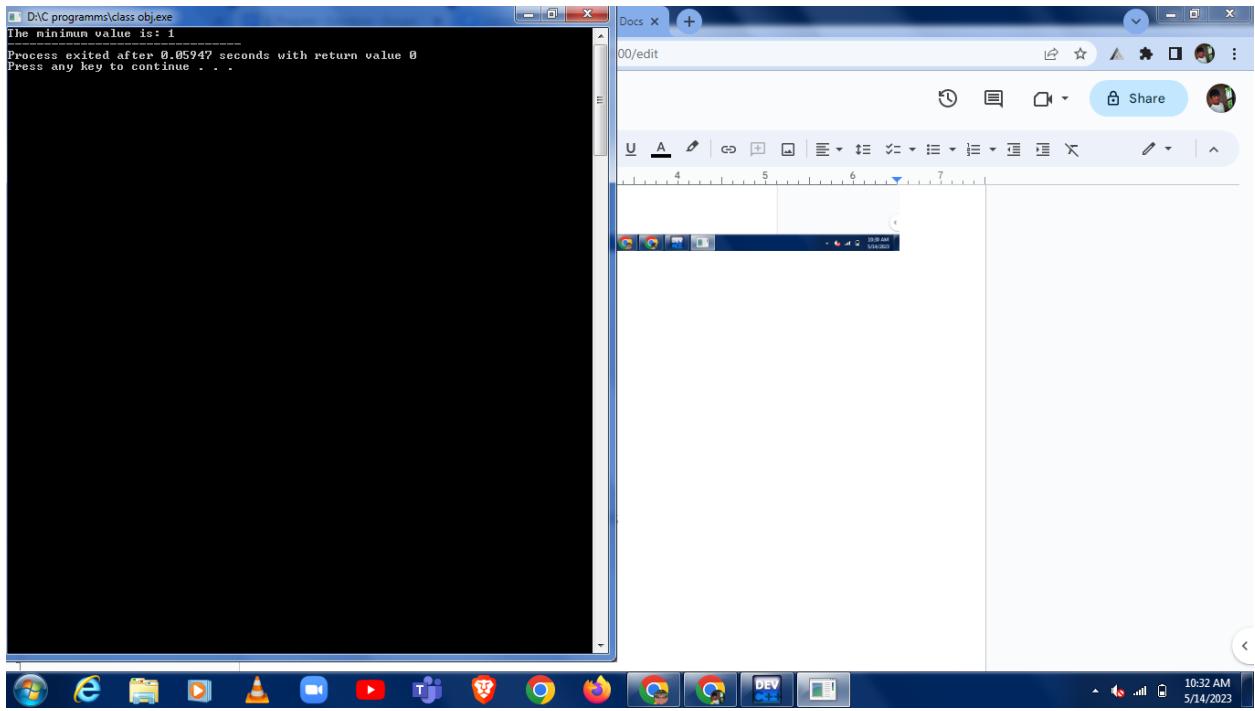
55. Find max of 10 numbers using array

```
#include <stdio.h>
int main()
{
    int numbers[10];
    int i,max;
    printf("Enter 10 numbers:");
    for (i = 0; i < 10; i++)
        scanf("%d", &numbers[i]);
    max = numbers[0];
    for (i = 1; i < 10; i++) {
        if (numbers[i] > max)
            max = numbers[i];
    }
    printf("The maximum number is %d", max);
    return 0;
}
```



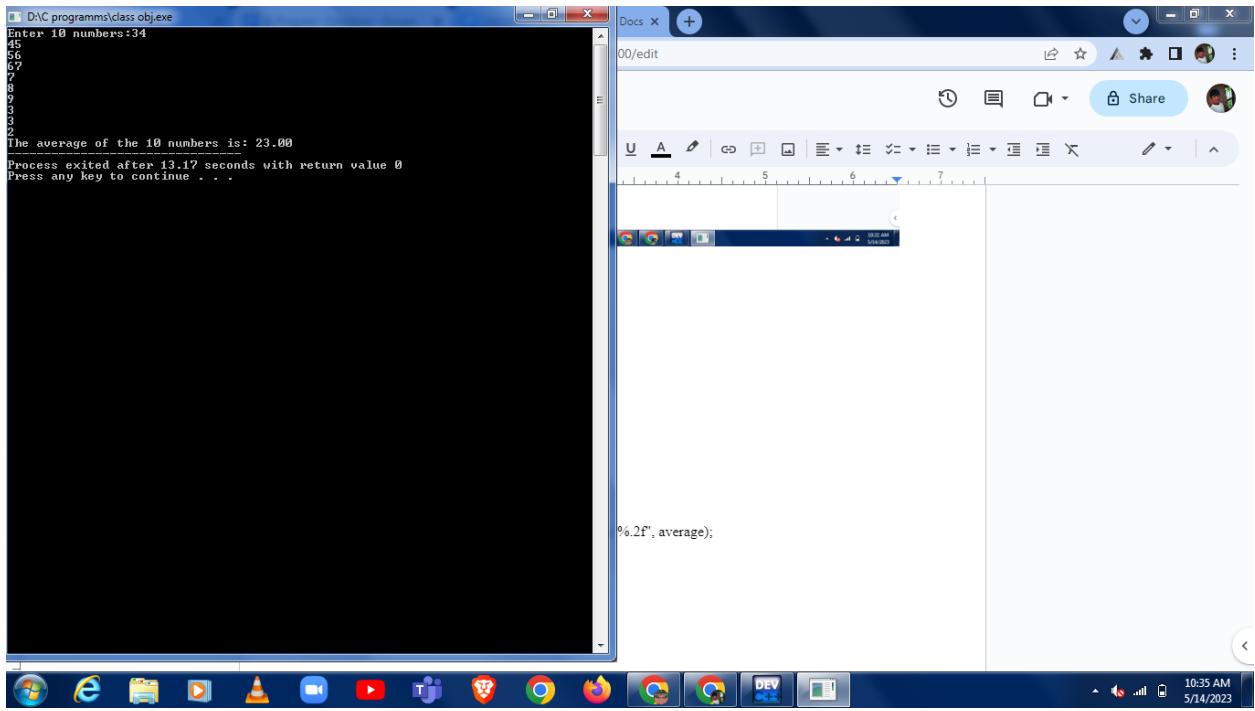
56.Find min of 10 numbers using array

```
#include <stdio.h>
int main()
{
    int arr[10] = {4,7,1,8,3,9,2,6,5,10};
    int min = arr[0];
    for (int i = 1; i < 10; i++)
    {
        if (arr[i] < min)
        {
            min = arr[i];
        }
    }
    printf("The minimum value is: %d", min);
    return 0;
}
```



57.Find average of 10 numbers using array

```
#include <stdio.h>
int main()
{
    int arr[10];
    int sum = 0;
    float average;
    printf("Enter 10 numbers:");
    for(int i = 0; i < 10; i++)
    {
        scanf("%d", &arr[i]);
        sum += arr[i];
    }
    average =sum / 10;
    printf("The average of the 10 numbers is: %.2f", average);
    return 0;
}
```

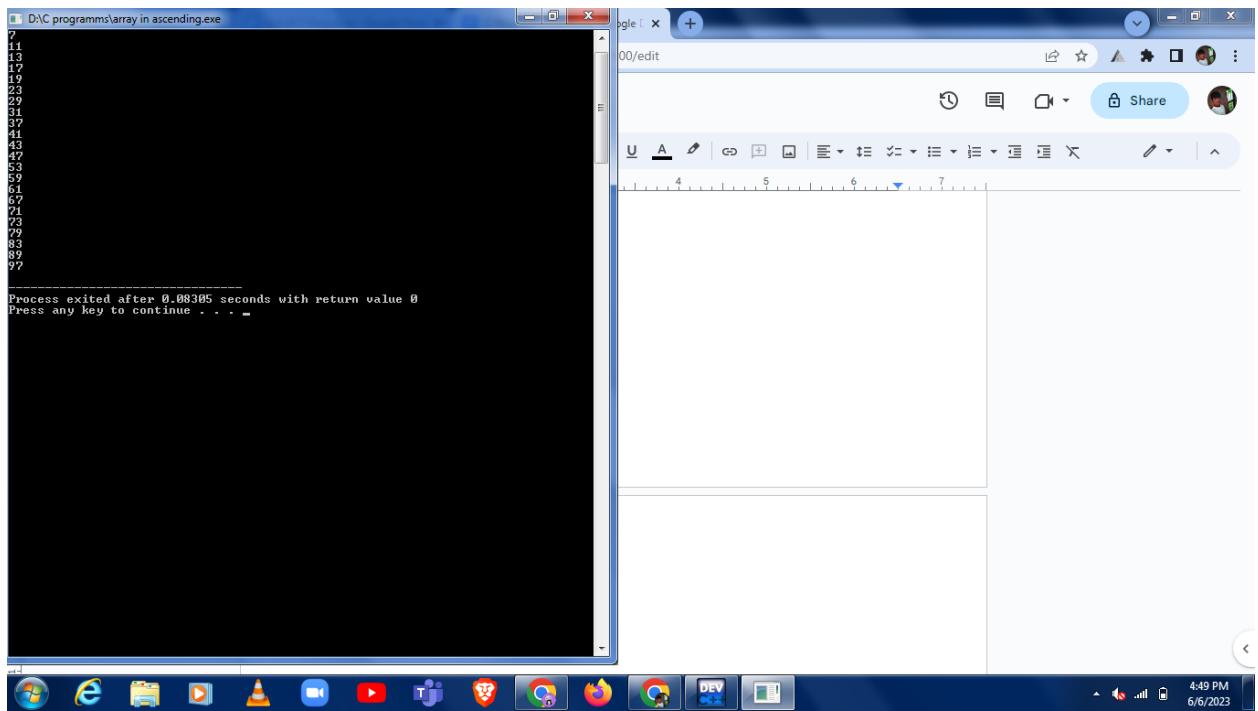


58.prime num b/w 1 to 100

```
#include <stdio.h>
int main()
{
    int i, j;

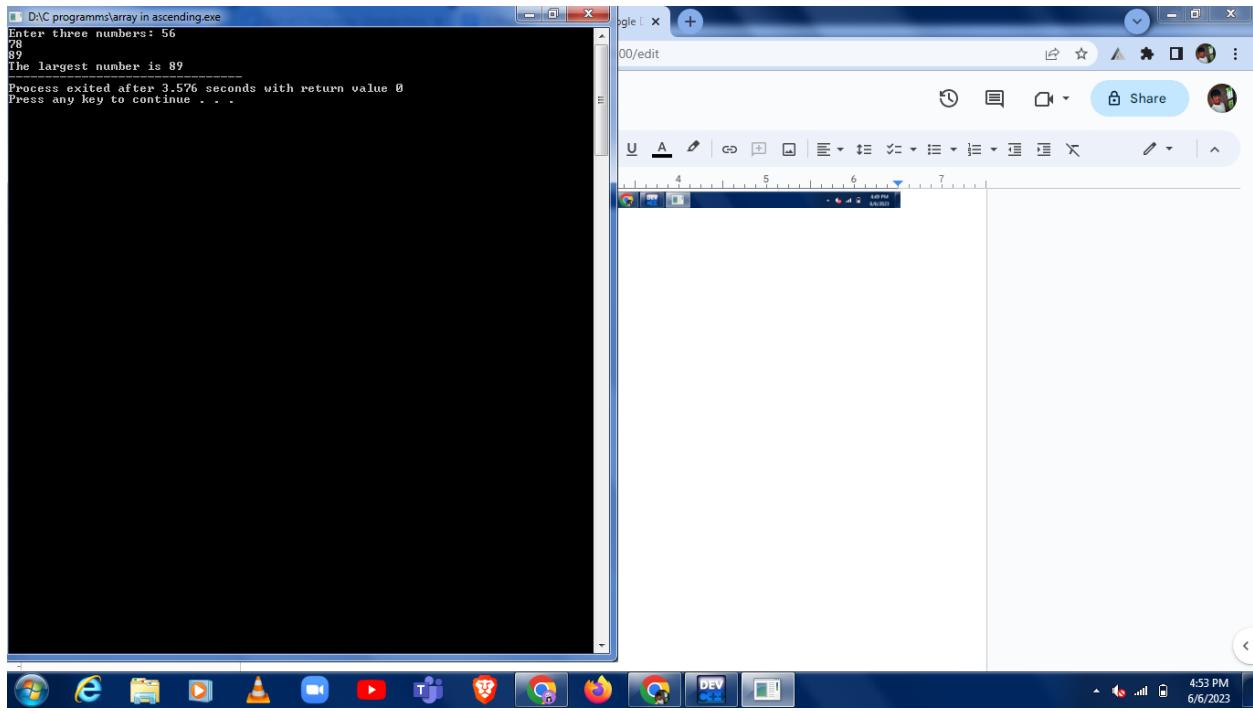
    for (i = 2; i <= 100; i++)
    {
        for (j = 2; j < i; j++)
        {
            if (i % j == 0)
            {
                break;
            }
        }
        if (j == i)
        {
            printf("%d\n", i);
        }
    }

    return 0;
}
```



59.largest among 3 num

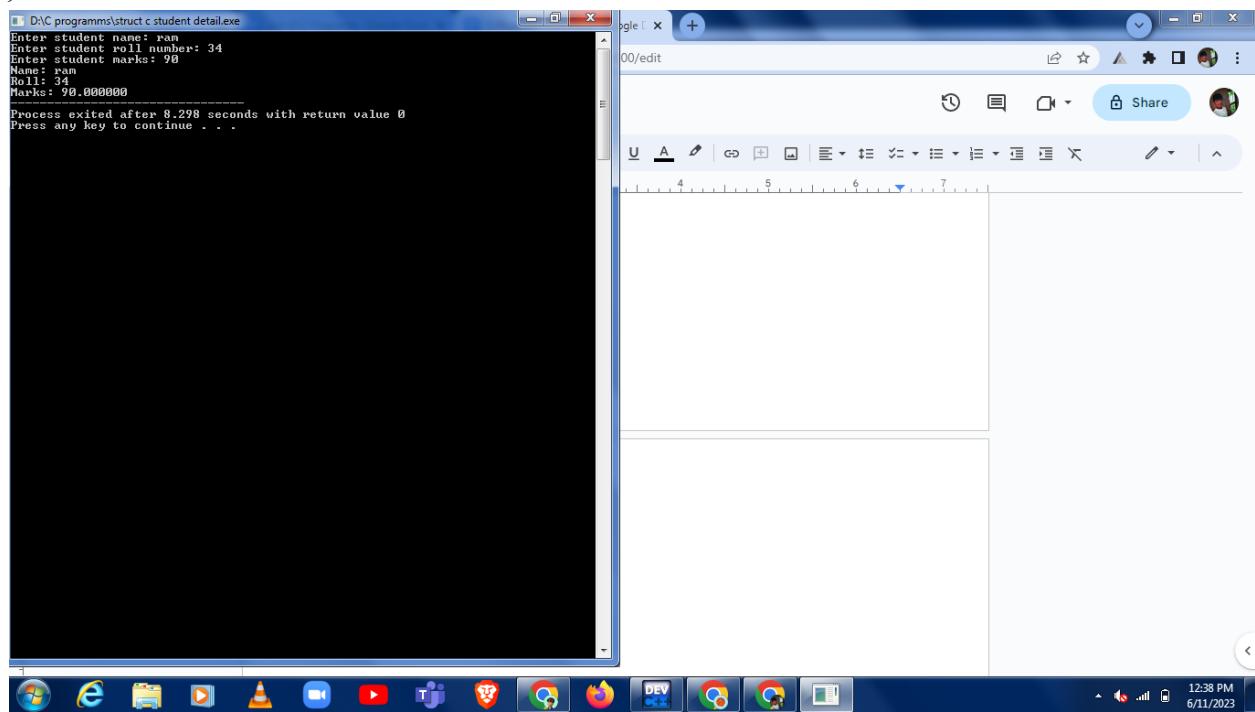
```
#include <stdio.h>
int main()
{
    int a, b, c;
    printf("Enter three numbers: ");
    scanf("%d %d %d", &a, &b, &c);
    int largest = a;
    if (b > largest)
    {
        largest = b;
    }
    if (c > largest)
    {
        largest = c;
    }
    printf("The largest number is %d", largest);
    return 0;
}
```



## 60.struct student details

```
#include <stdio.h>
struct student
{
    char name[50];
    int roll;
    float marks;
};
void printStudentDetails(struct student s) {
    printf("Name: %s\n", s.name);
    printf("Roll: %d\n", s.roll);
    printf("Marks: %f", s.marks);
}
int main()
{
    struct student s;
    printf("Enter student name: ");
    scanf("%s", &s.name);
    printf("Enter student roll number: ");
    scanf("%d", &s.roll);
    printf("Enter student marks: ");
    scanf("%f", &s.marks);
```

```
printStudentDetails(s);
return 0;
}
```



### 61.largest among 3 using nested if else

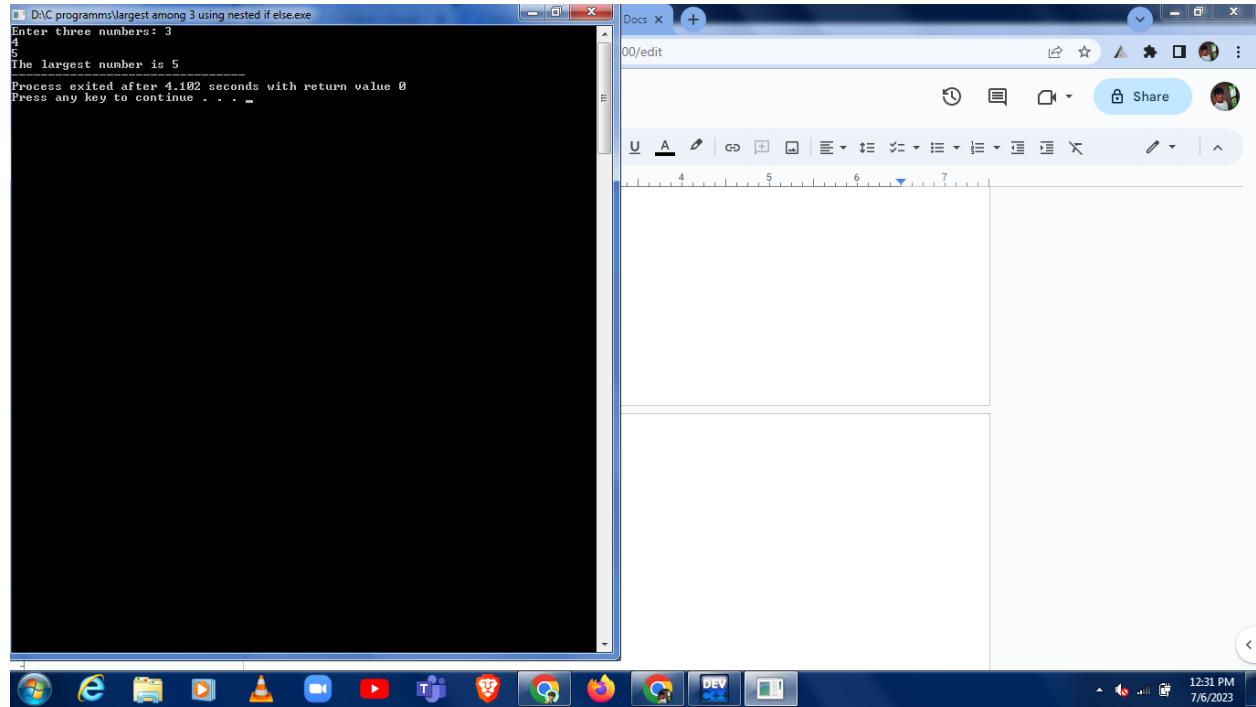
```
#include <stdio.h>
int main()
{
    int a,b,c,largest;
    printf("Enter three numbers: ");
    scanf("%d%d%d", &a,&b,&c);
    if (a >= b && a >= c)
    {
        largest = a;
    }
    else if (b>=a && b>=c)
    {
        largest = b;
    }
    else
    {
        largest = c;
    }
}
```

```
}
```

```
printf("The largest number is %d",largest);
```

```
return 0;
```

```
}
```



## 62.sum of 10 natural num using while loop

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int n, i, sum = 0;
```

```
    printf("Enter a positive integer: ");
```

```
    scanf("%d", &n);
```

```
    i = 1;
```

```
    while (i <= n)
```

```
    {
```

```
        sum += i;
```

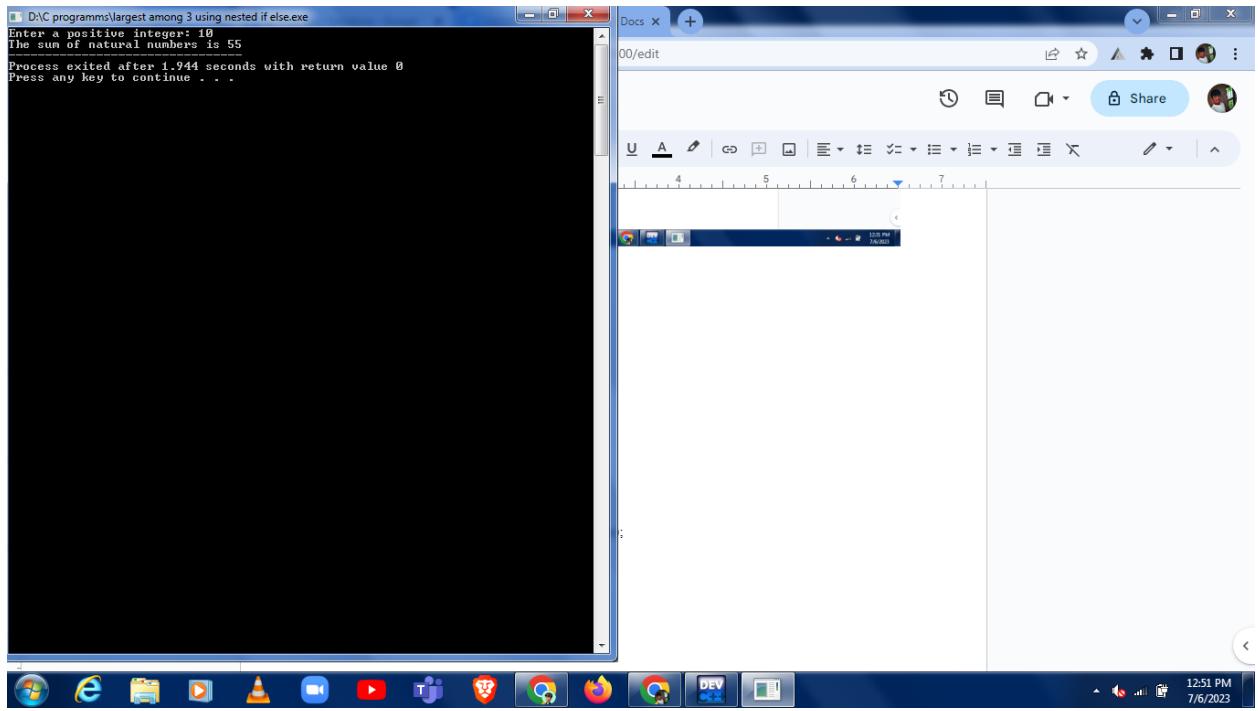
```
        i++;
```

```
    }
```

```
    printf("The sum of natural numbers is %d",sum);
```

```
    return 0;
```

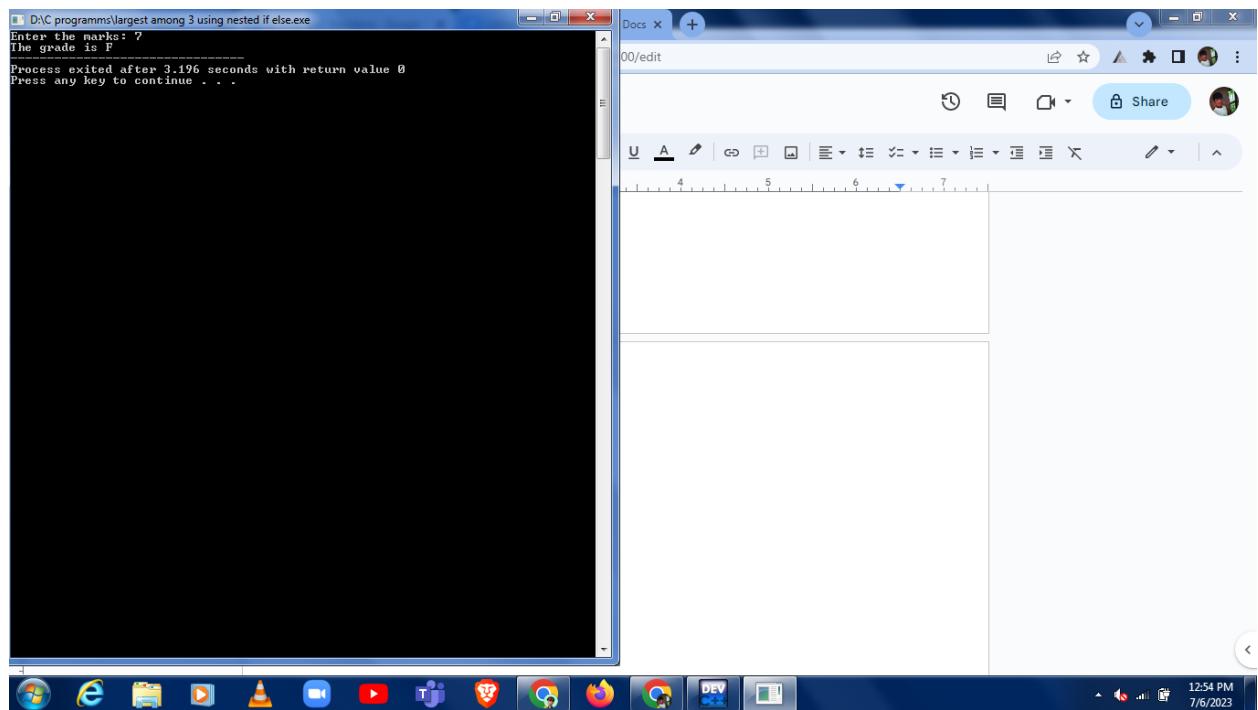
```
}
```



63.find grade using switch case

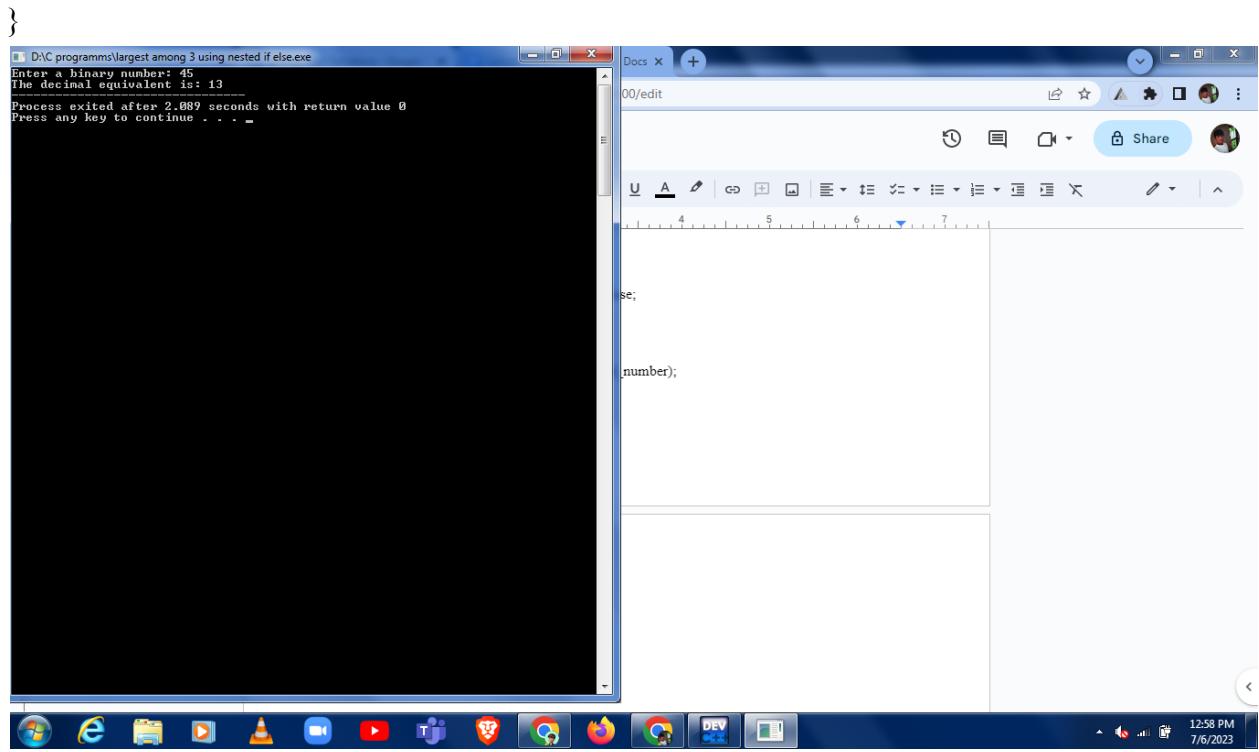
```
#include <stdio.h>
int main()
{
    int marks;
    char grade;
    printf("Enter the marks: ");
    scanf("%d", &marks);
    switch (marks / 10)
    {
        case 10:
        case 9:
            grade = 'A';
            break;
        case 8:
            grade = 'B';
            break;
        case 7:
            grade = 'C';
            break;
        case 6:
            grade = 'D';
    }
}
```

```
    break;  
default:  
    grade = 'F';  
    break;  
}  
printf("The grade is %c",grade);  
return 0;  
}
```



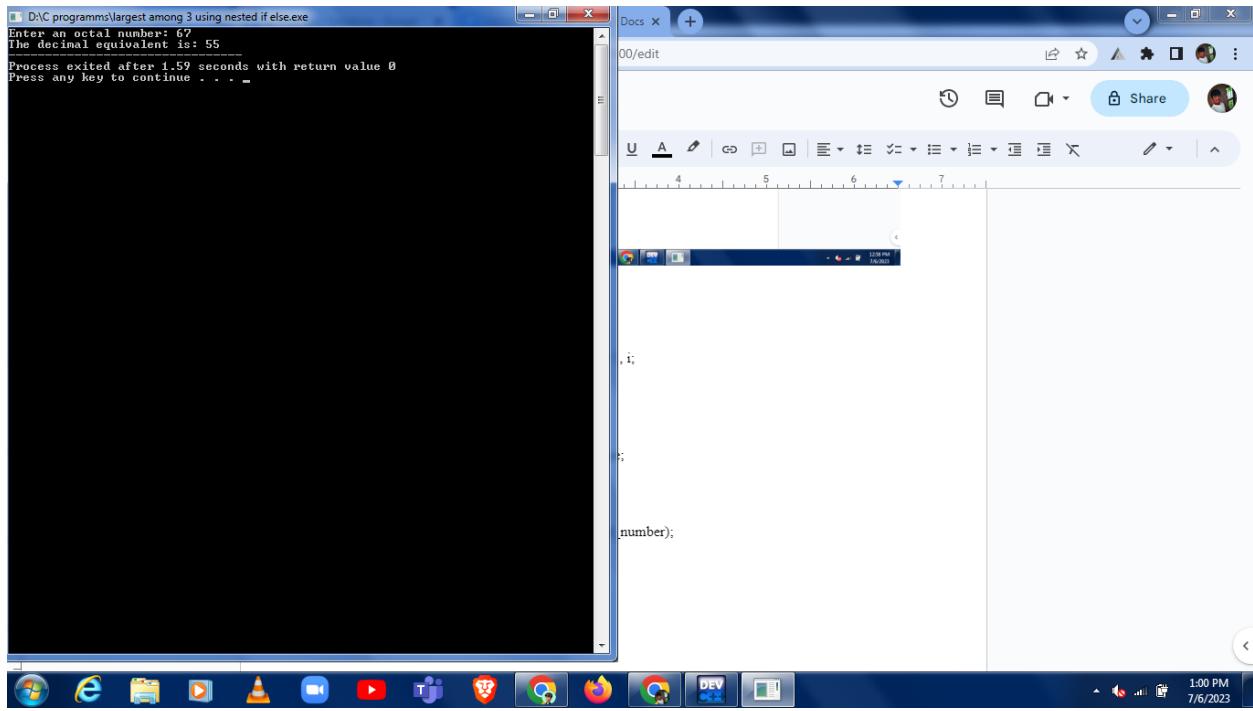
64. convert binary to decimal

```
#include <stdio.h>
int main()
{
    int binary_number, decimal_number = 0, base = 1, i;
    printf("Enter a binary number: ");
    scanf("%d", &binary_number);
    for (i = 0; binary_number != 0; i++)
    {
        decimal_number += binary_number % 10 * base;
        base *= 2;
        binary_number /= 10;
    }
    printf("The decimal equivalent is: %d", decimal_number);
    return 0;
}
```



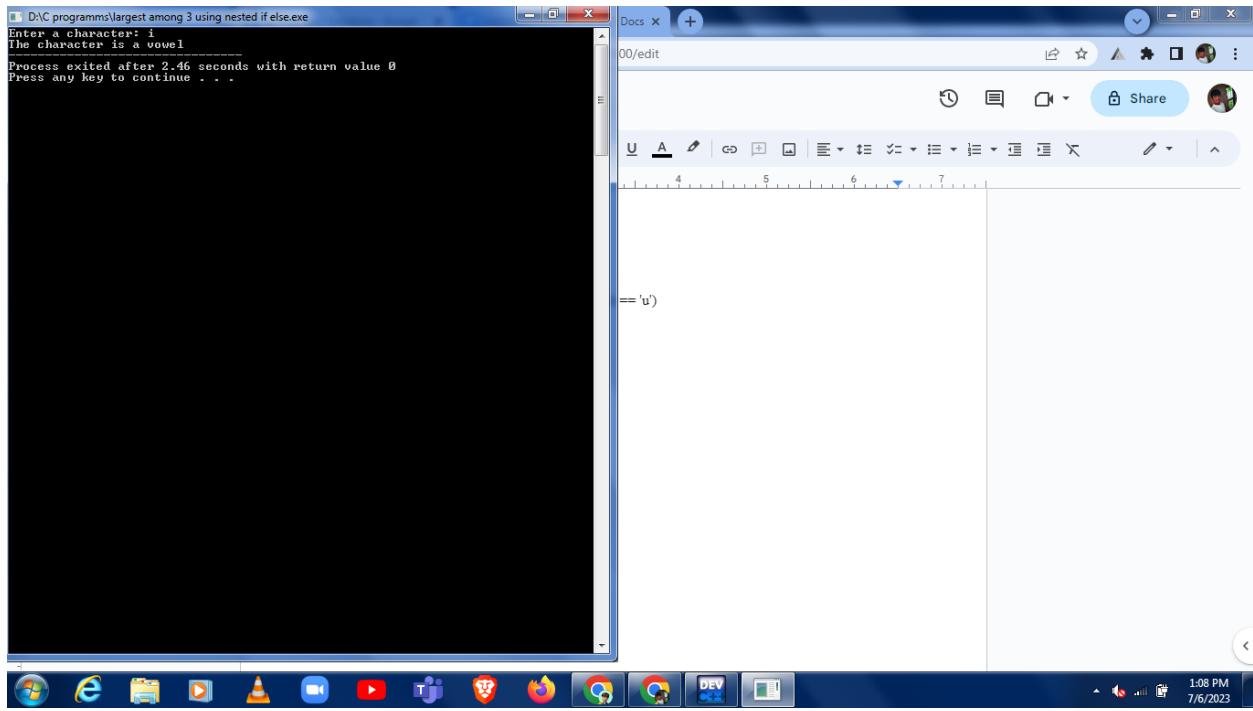
## 65.octal to decimal

```
#include <stdio.h>
int main()
{
    int octal_number, decimal_number = 0, base = 1, i;
    printf("Enter an octal number: ");
    scanf("%d", &octal_number);
    for (i = 0; octal_number != 0; i++)
    {
        decimal_number += octal_number % 10 * base;
        base *= 8;
        octal_number /= 10;
    }
    printf("The decimal equivalent is: %d", decimal_number);
    return 0;
}
```

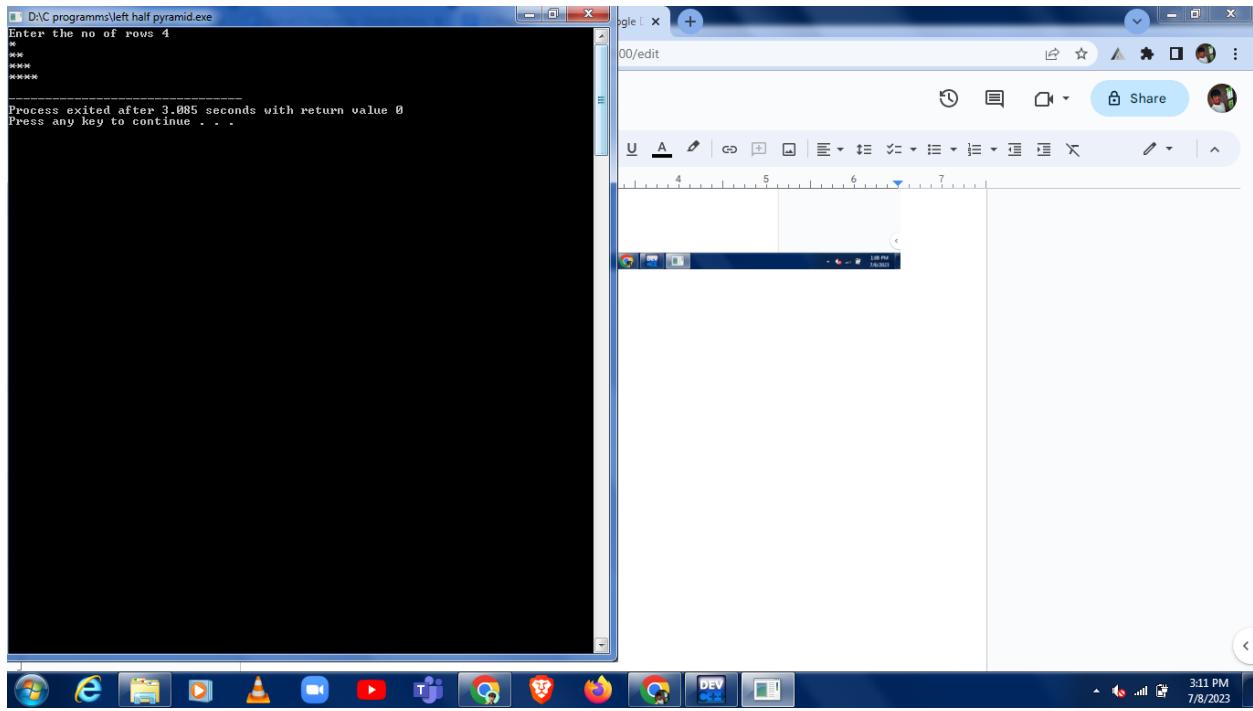


## 66. find vowel using if else

```
#include <stdio.h>
void is_vowel(char ch)
{
    if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u')
    {
        printf("The character is a vowel");
    } else
    {
        printf("The character is not a vowel");
    }
}
int main()
{
    char ch;
    printf("Enter a character: ");
    scanf("%c", &ch);
    is_vowel(ch);
    return 0;
}
```

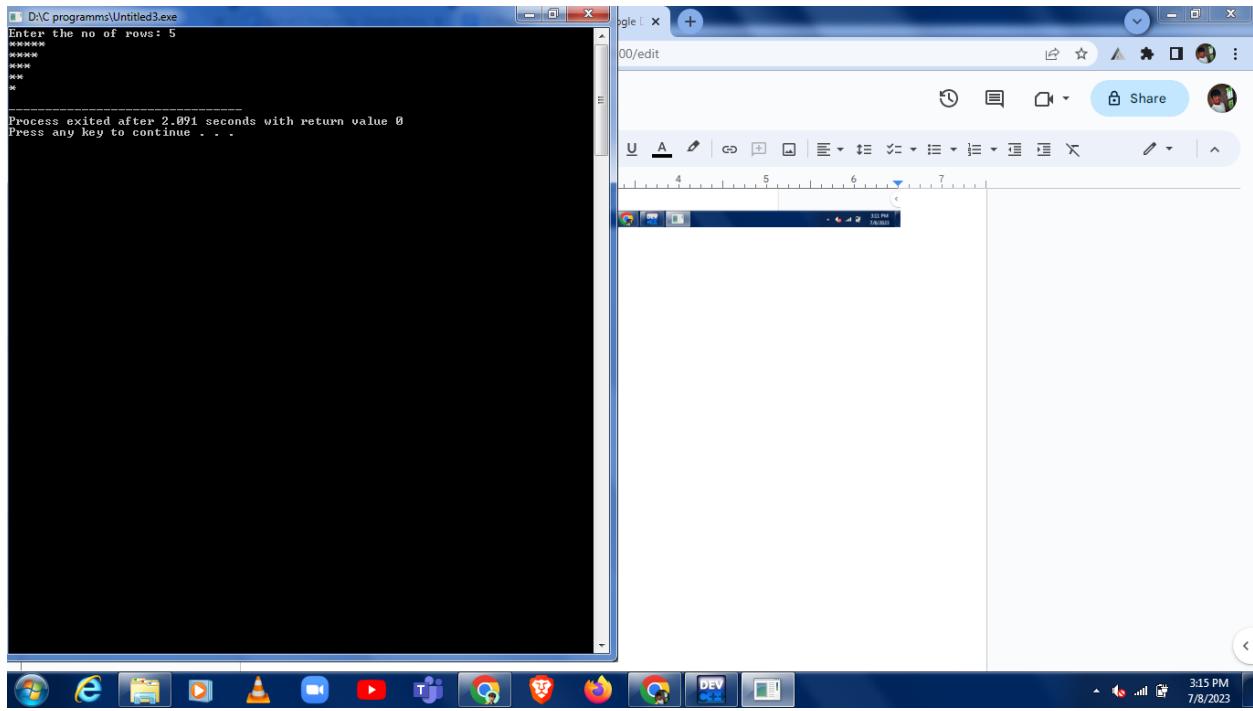


```
67.left half * pyramid
#include <stdio.h>
int main()
{
    int i,j,rows;
    printf("Enter the no of rows ");
    scanf("%d",&rows);
    for (i = 1; i <= rows; ++i)
    {
        for (j = 1; j <= i; ++j)
        {
            printf("*");
        }
        printf("\n");
    }
    return 0;
}
```



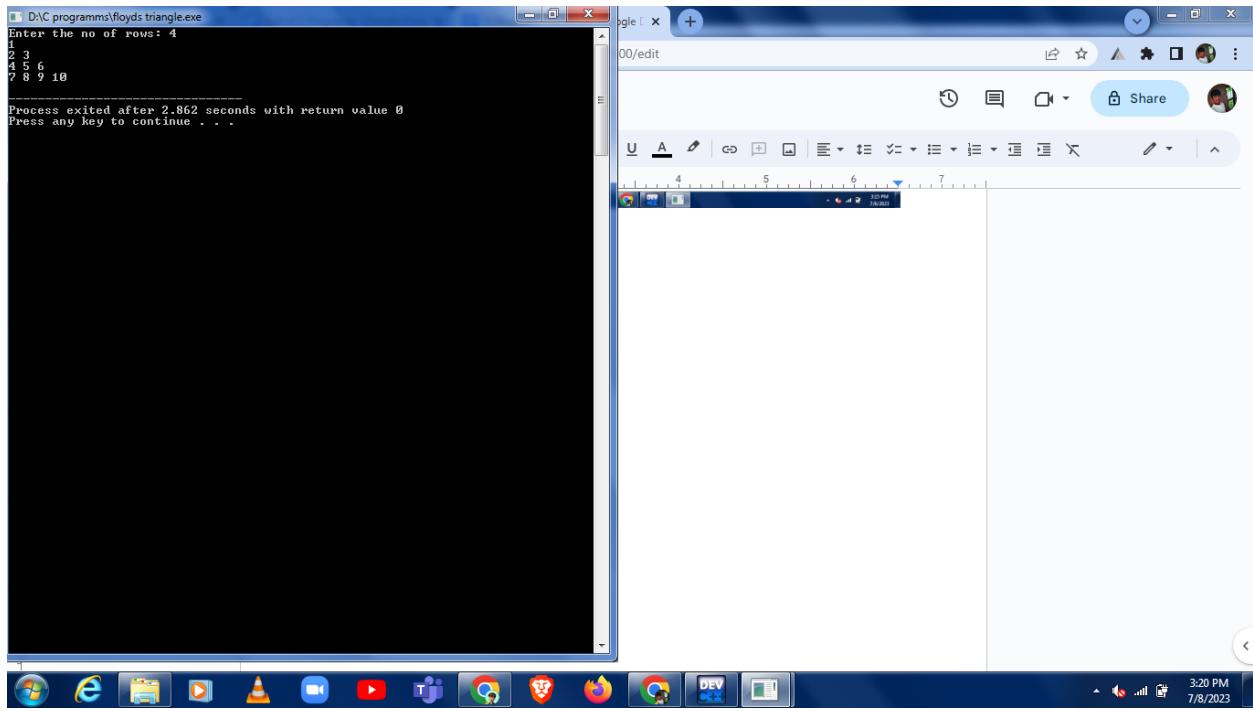
68.inverted pyramid of \*

```
#include <stdio.h>
int main()
{
    int i,j,rows;
    printf("Enter the no of rows: ");
    scanf("%d",&rows);
    for (i = rows; i >= 1; --i)
    {
        for (j = 1; j <= i; ++j)
        {
            printf("*");
        }
        printf("\n");
    }
    return 0;
}
```

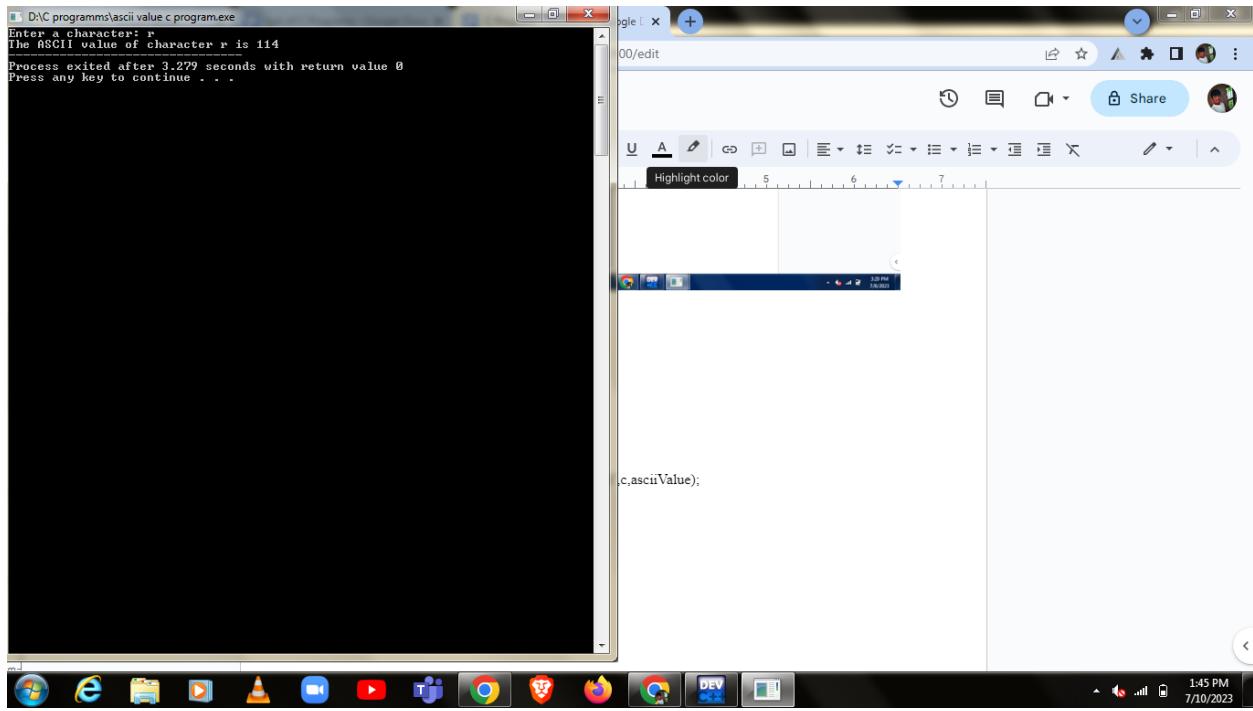


## 69. floyds triangle

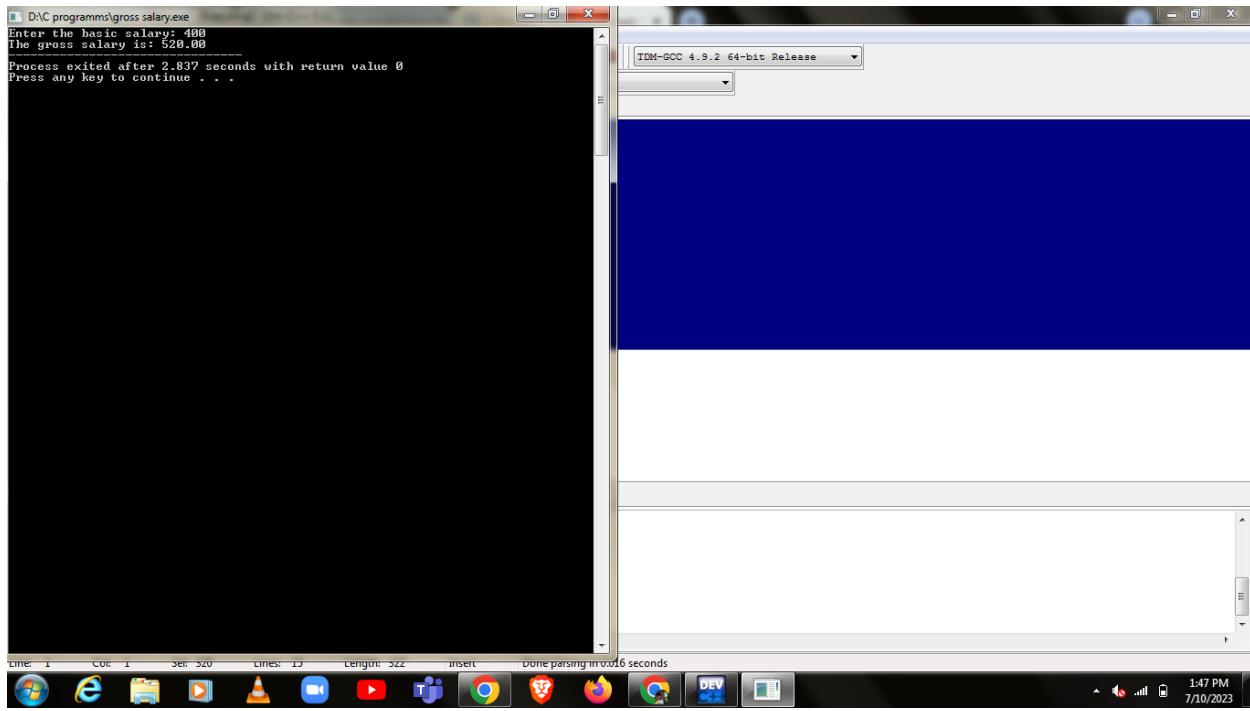
```
#include <stdio.h>
int main()
{
    int rows, i,j,number = 1;
    printf("Enter the no of rows: ");
    scanf("%d",&rows);
    for (i = 1; i <= rows; i++)
    {
        for (j = 1; j <= i; ++j)
        {
            printf("%d ", number);
            ++number;
        }
        printf("\n");
    }
    return 0;
}
```



```
70.ascii value
#include <stdio.h>
int main()
{
    char c;
    printf("Enter a character: ");
    scanf("%c",&c);
    int asciiValue = c;
    printf("The ASCII value of character %c is %d",c,asciiValue);
    return 0;
}
```

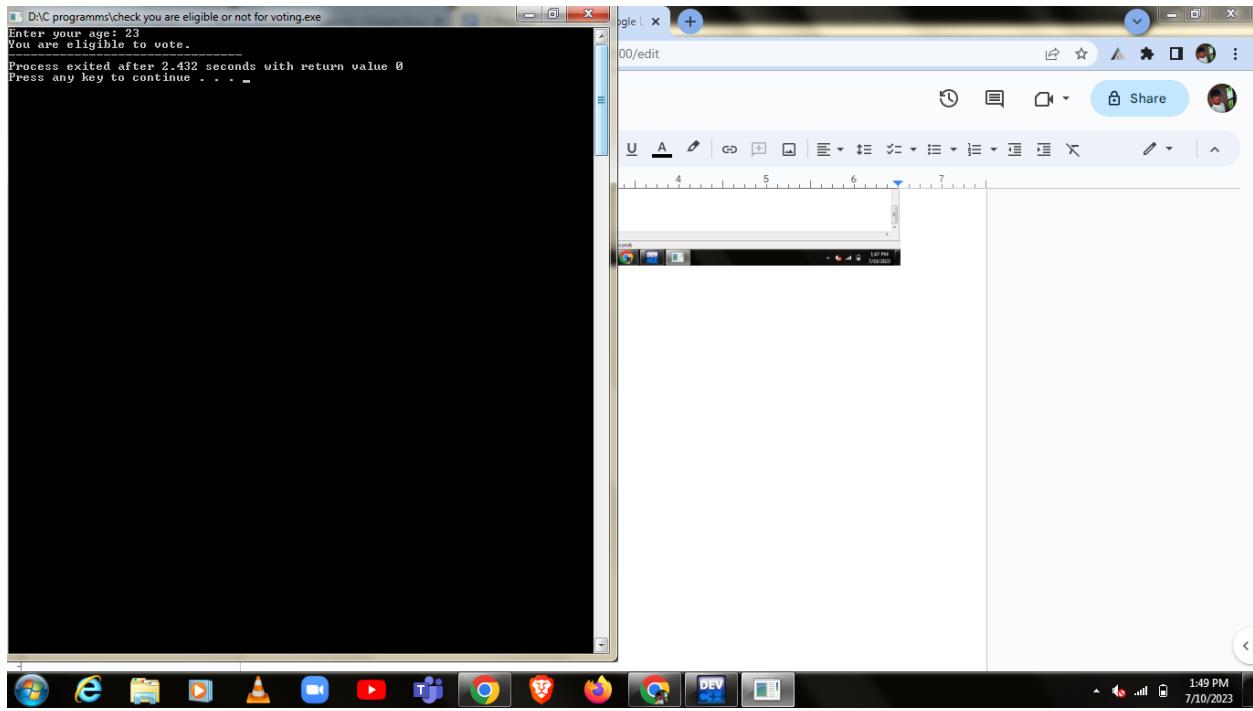


```
71.gross salary
#include <stdio.h>
int main()
{
    int basicSalary;
    float HRA,DA;
    float grossSalary;
    printf("Enter the basic salary: ");
    scanf("%d",&basicSalary);
    HRA = 0.2*basicSalary;
    DA = 0.1*basicSalary;
    grossSalary = basicSalary+HRA+DA;
    printf("The gross salary is: %.2f", grossSalary);
    return 0;
}
```



72.eligible to vote or not

```
#include <stdio.h>
int main()
{
    int age;
    printf("Enter your age: ");
    scanf("%d", &age);
    if (age >= 18)
    {
        printf("You are eligible to vote.");
    } else
    {
        printf("You are not eligible to vote.");
    }
    return 0;
}
```



### 73.difference b/w time

```
#include <stdio.h>
struct time
{
    int hour;
    int minute;
    int second;
};
int main()
{
    struct time t1, t2, diff;
    printf("Enter time 1 (HH:MM:SS): ");
    scanf("%d:%d:%d", &t1.hour, &t1.minute, &t1.second);
    printf("Enter time 2 (HH:MM:SS): ");
    scanf("%d:%d:%d", &t2.hour, &t2.minute, &t2.second);
    diff.hour = t2.hour - t1.hour;
    diff.minute = t2.minute - t1.minute;
    diff.second = t2.second - t1.second;
    if (diff.second < 0)
    {
        diff.minute--;
        diff.second += 60;
```

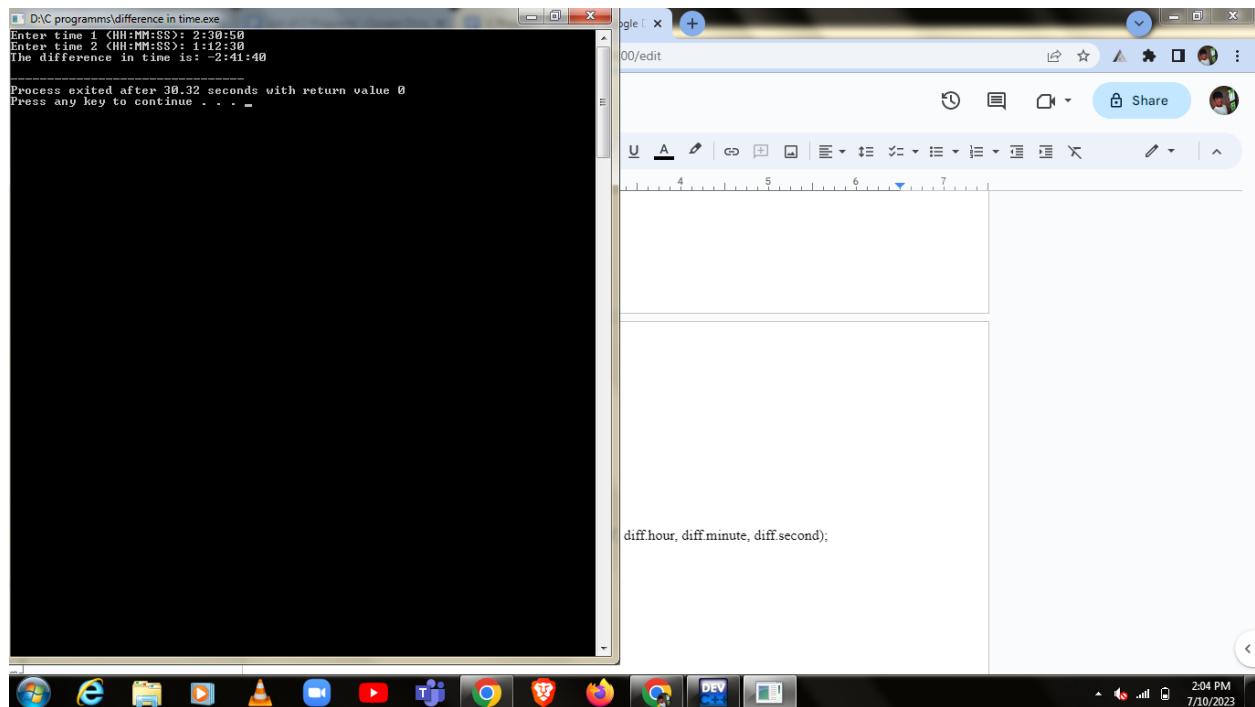
```

}

if (diff.minute < 0)
{
    diff.hour--;
    diff.minute += 60;
}

printf("The difference in time is: %d:%d:%d\n", diff.hour, diff.minute, diff.second);
return 0;
}

```



#### 74.compare string using strcmp

```

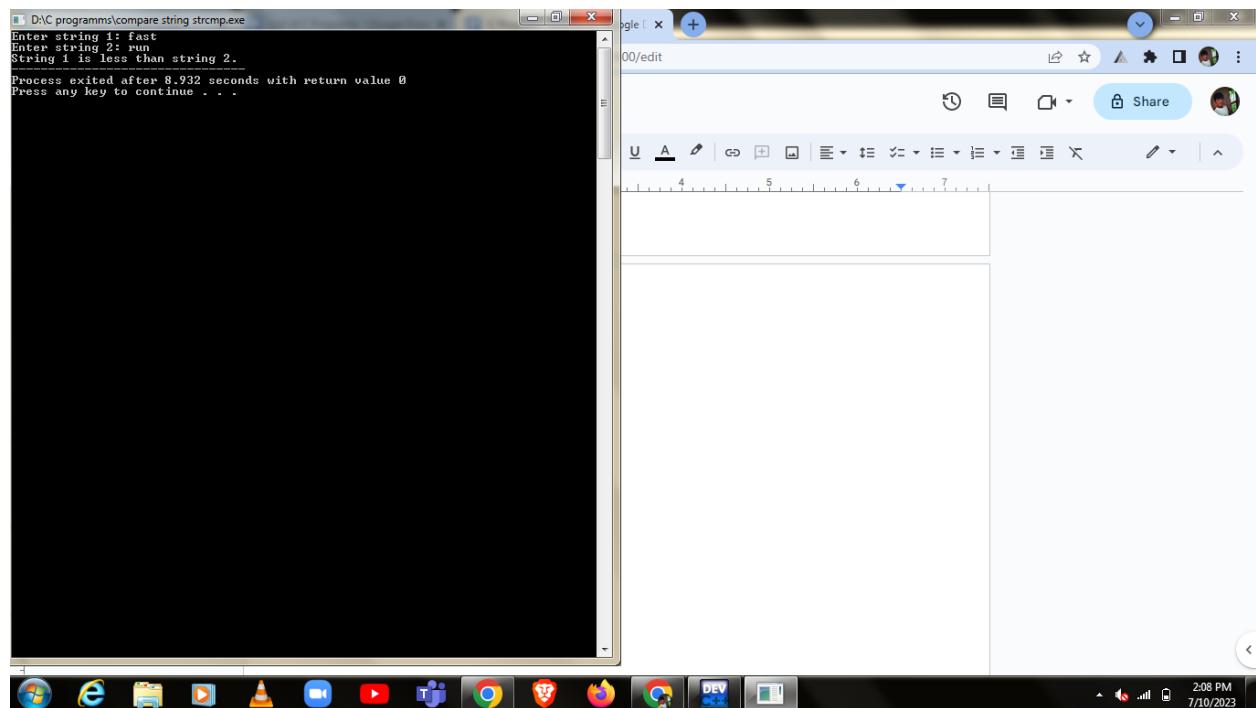
#include <stdio.h>
#include <string.h>
int main()
{
    char str1[100], str2[100];
    printf("Enter string 1: ");
    scanf("%s", str1);
    printf("Enter string 2: ");
    scanf("%s", str2);
    int result = strcmp(str1, str2);
    if (result == 0)
    {

```

```

        printf("The two strings are equal.");
    }
else if (result < 0)
{
    printf("String 1 is less than string 2.");
}
else
{
    printf("String 1 is greater than string 2.");
}
return 0;
}

```



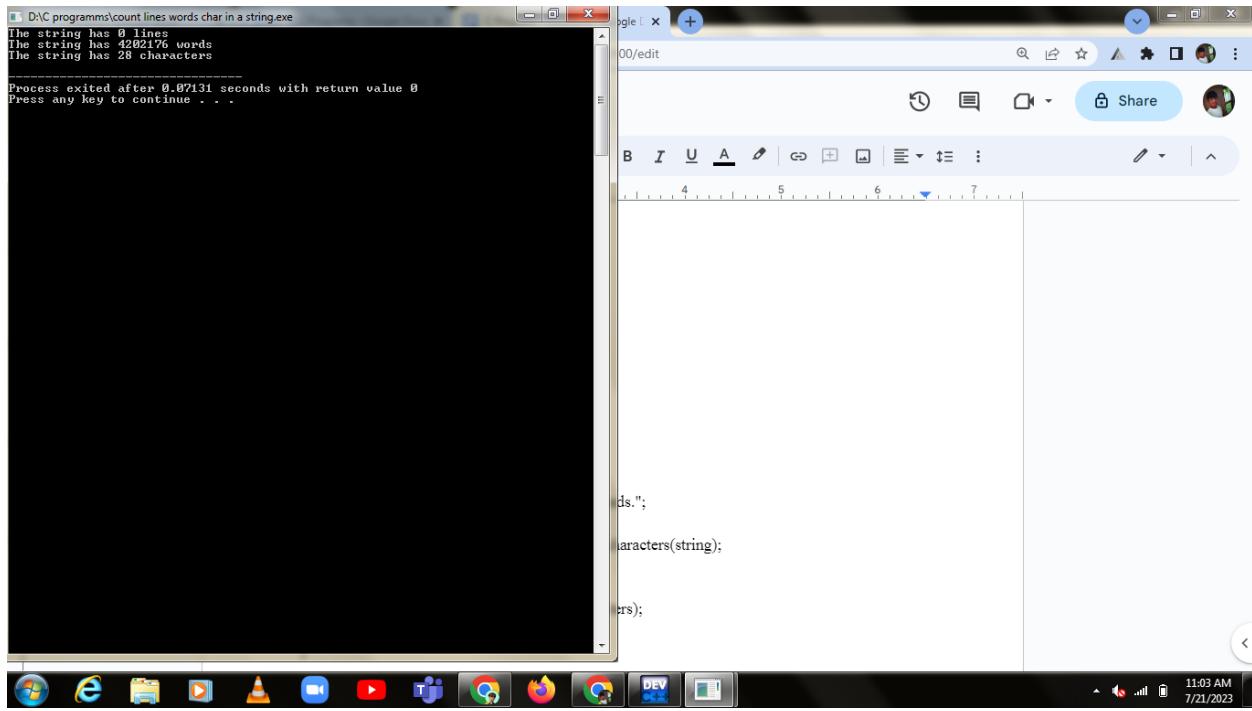
### 75.count lines words characters in a string

```

#include <stdio.h>
int count_lines_words_characters(char *string)
{
    int lines = 0;
    int words = 0;
    int characters = 0;
    for (int i = 0; string[i] != '\0'; i++)
    {
        if (string[i] == '\n')

```

```
    {
        lines++;
    }
    else if (string[i] == ' ')
    {
        words++;
    }
    else
    {
        characters++;
    }
}
return lines, words, characters;
}
int main()
{
    char *string = "I can run 200 meters in 30 seconds.";
    int lines, words, characters;
    lines, words, characters = count_lines_words_characters(string);
    printf("The string has %d lines\n", lines);
    printf("The string has %d words\n", words);
    printf("The string has %d characters\n", characters);
    return 0;
}
```



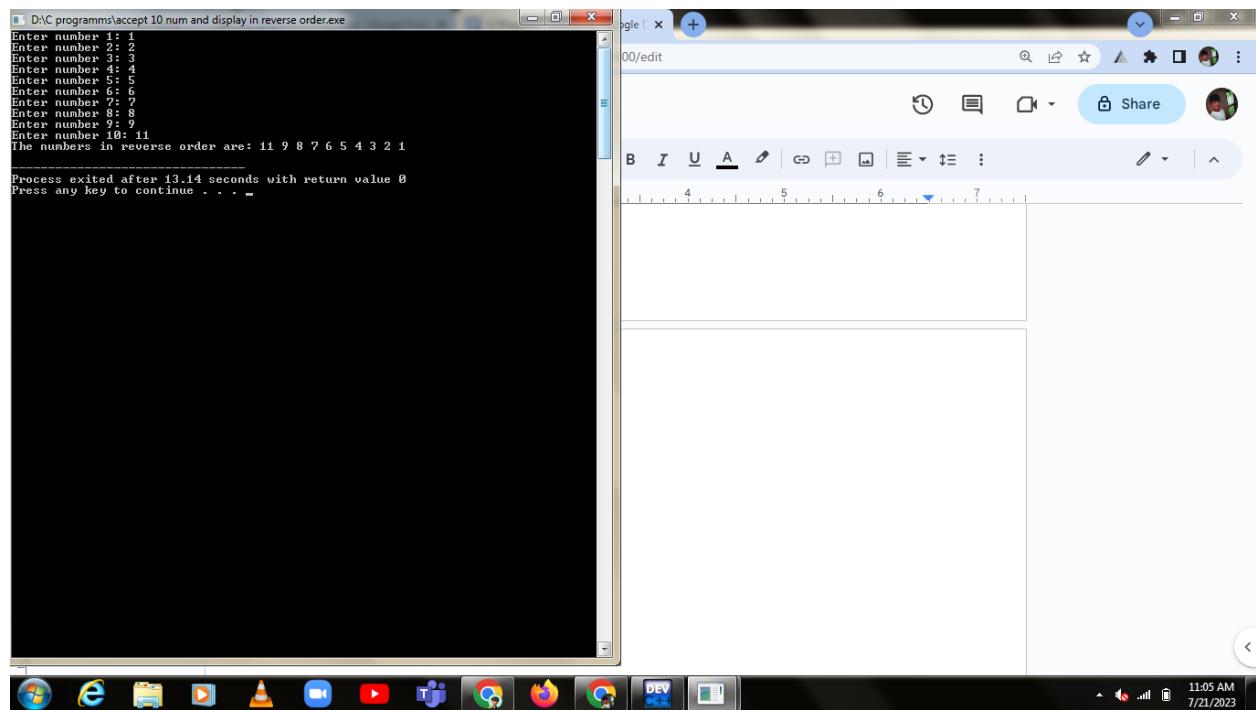
76.accept 10 num and display in reverse order

```
#include <stdio.h>
void reverse_array(int *array, int n)
{
    int i, temp;
    for (i = 0; i < n / 2; i++)
    {
        temp = array[i];
        array[i] = array[n - 1 - i];
        array[n - 1 - i] = temp;
    }
}
int main()
{
    int array[10], i;
    for (i = 0; i < 10; i++)
    {
        printf("Enter number %d: ", i + 1);
        scanf("%d", &array[i]);
    }
    reverse_array(array, 10);
    printf("The numbers in reverse order are: ");
```

```

for (i = 0; i < 10; i++)
{
    printf("%d ", array[i]);
}
printf("\n");
return 0;
}

```



### 80.read and print 2\*2 matrix

```

#include <stdio.h>
void read_matrix(int matrix[2][2])
{
    for (int i = 0; i < 2; i++)
    {
        for (int j = 0; j < 2; j++)
        {
            printf("Enter element [%d][%d]: ", i, j);
            scanf("%d", &matrix[i][j]);
        }
    }
}
void print_matrix(int matrix[2][2])
{

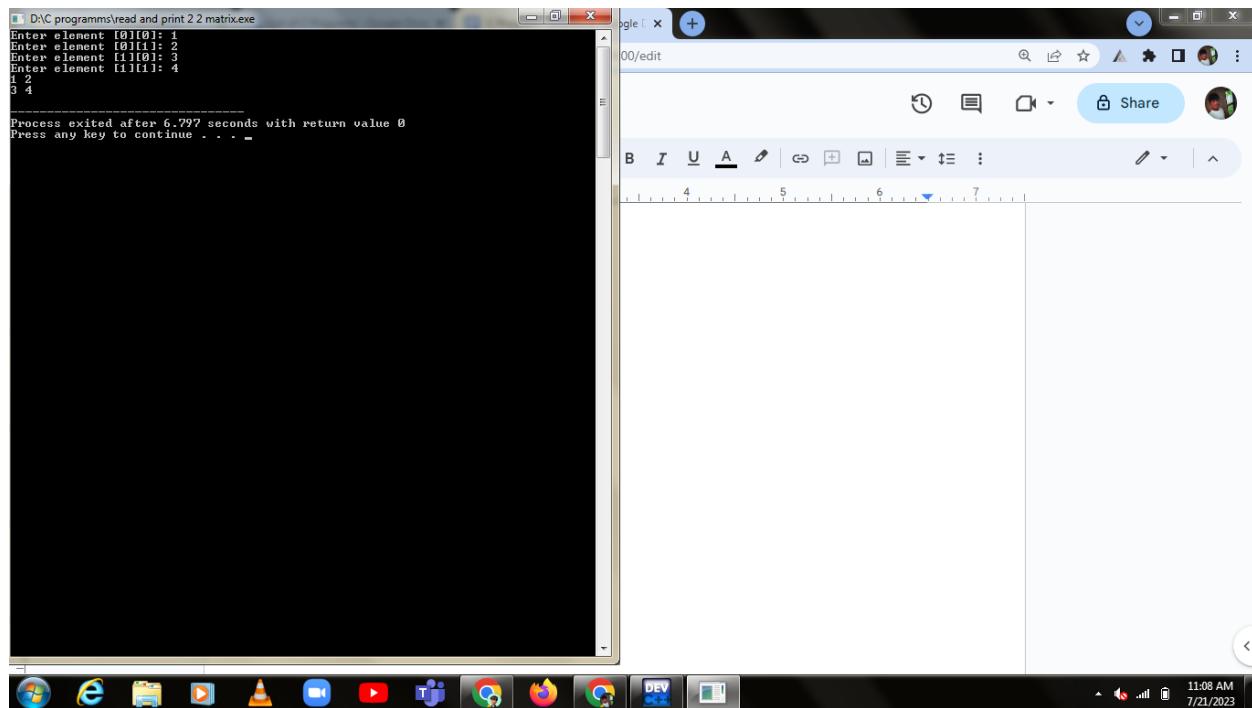
```

```

for (int i = 0; i < 2; i++)
{
    for (int j = 0; j < 2; j++)
    {
        printf("%d ", matrix[i][j]);
    }
    printf("\n");
}
}

int main()
{
    int matrix[2][2];
    read_matrix(matrix);
    print_matrix(matrix);
    return 0;
}

```



### 81.read and print 3\*3 matrix

```

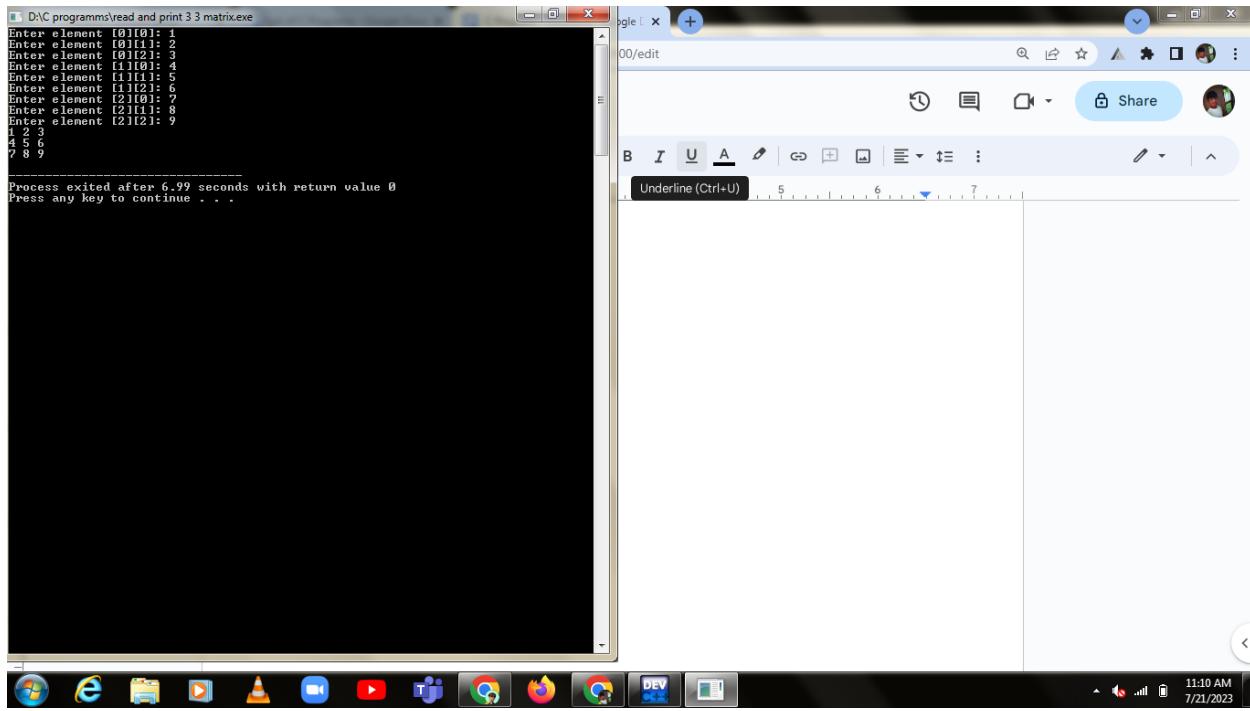
#include <stdio.h>
void read_matrix(int matrix[3][3])
{
    for (int i = 0; i < 3; i++)
    {

```

```
for (int j = 0; j < 3; j++)
{
    printf("Enter element [%d][%d]: ", i, j);
    scanf("%d", &matrix[i][j]);
}
}

void print_matrix(int matrix[3][3])
{
    for (int i = 0; i < 3; i++)
    {
        for (int j = 0; j < 3; j++)
        {
            printf("%d ", matrix[i][j]);
        }
        printf("\n");
    }
}

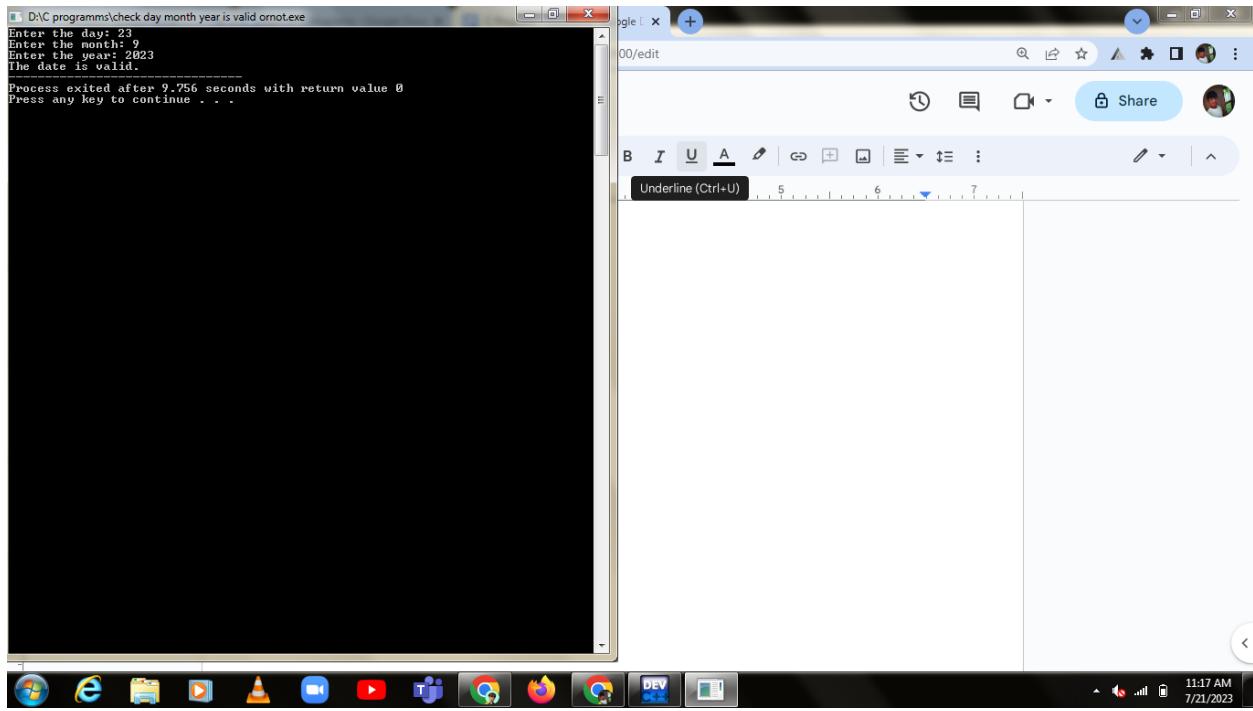
int main()
{
    int matrix[3][3];
    read_matrix(matrix);
    print_matrix(matrix);
    return 0;
}
```



83.check the given date month year is correct or not using if else

```
#include <stdio.h>
int main()
{
    int day, month, year;
    printf("Enter the day: ");
    scanf("%d", &day);
    printf("Enter the month: ");
    scanf("%d", &month);
    printf("Enter the year: ");
    scanf("%d", &year);
    if (year < 1800 || year > 9999)
    {
        printf("The year is not valid");
        return 0;
    }
    if (month < 1 || month > 12)
    {
        printf("The month is not valid");
        return 0;
    }
```

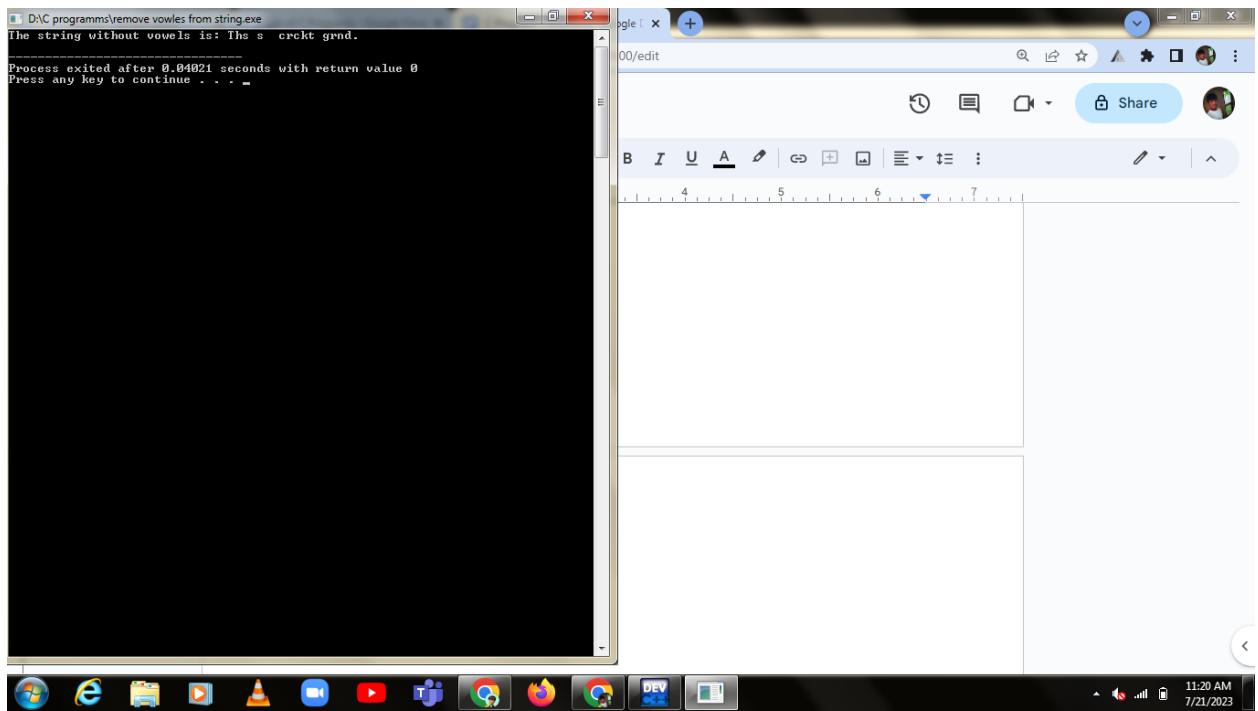
```
if (month == 1 || month == 3 || month == 5 || month == 7 || month == 8 || month == 10 || month
== 12)
{
    if (day < 1 || day > 31)
    {
        printf("The day is not valid");
        return 0;
    }
}
else if (month == 4 || month == 6 || month == 9 || month == 11)
{
    if (day < 1 || day > 30)
    {
        printf("The day is not valid");
        return 0;
    }
}
else
{
    if (day < 1 || day > 28)
    {
        printf("The day is not valid");
        return 0;
    }
}
printf("The date is valid.");
return 0;
}
```



### 85.remove vowels from string

```
#include <stdio.h>
void remove_vowels(char *string)
{
    char vowels[] = "aeiouAEIOU";
    char *new_string = malloc(strlen(string) + 1);
    int i, j = 0;
    for (i = 0; string[i] != '\0'; i++)
    {
        if (strchr(vowels, string[i]) == NULL)
        {
            new_string[j++] = string[i];
        }
    }
    new_string[j] = '\0';
    printf("The string without vowels is: %s\n", new_string);
}
int main()
{
    char string[] = "This is a cricket ground.";
    remove_vowels(string);
    return 0;
```

```
}
```



### 86.insert element in specific pos in array

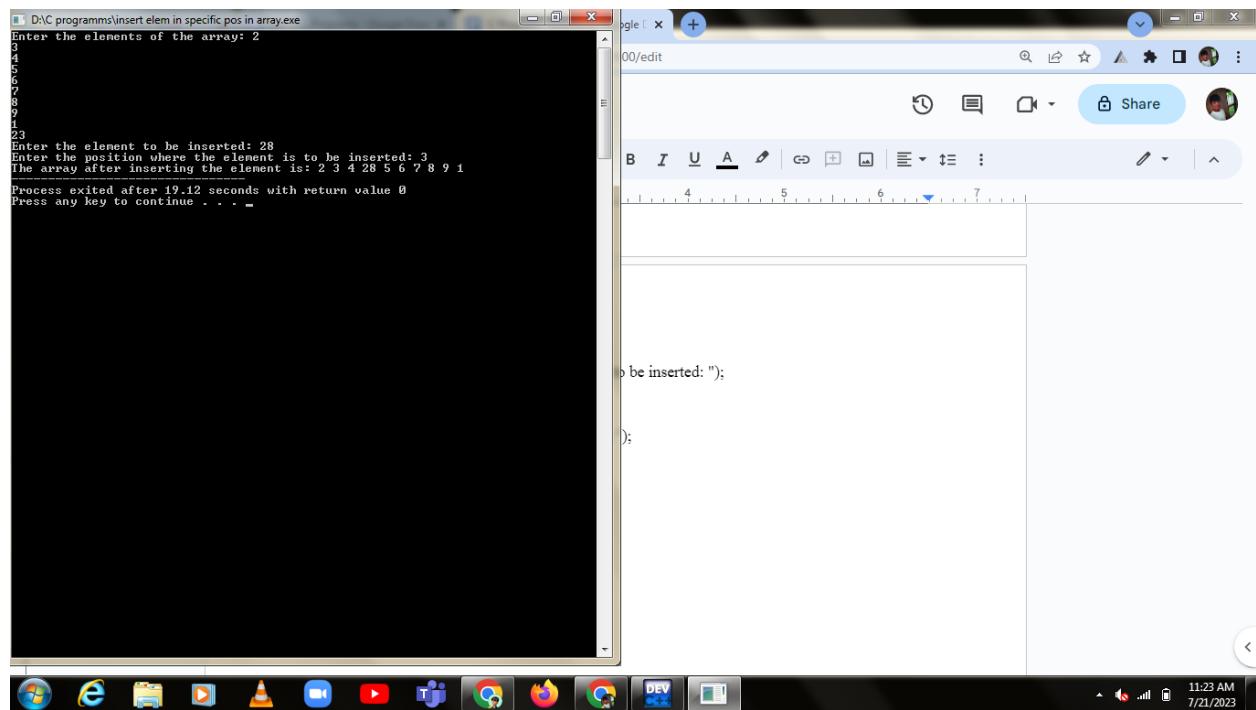
```
#include <stdio.h>
void insert_element(int *array, int size, int element, int position)
{
    for (int i = size - 1; i >= position; i--)
    {
        array[i + 1] = array[i];
    }

    array[position] = element;
}
int main()
{
    int array[10], i, element, position;
    printf("Enter the elements of the array: ");
    for (i = 0; i < 10; i++)
    {
        scanf("%d", &array[i]);
    }
    printf("Enter the element to be inserted: ");
    scanf("%d", &element);
```

```

printf("Enter the position where the element is to be inserted: ");
scanf("%d", &position);
insert_element(array, 10, element, position);
printf("The array after inserting the element is: ");
for (i = 0; i < 10; i++)
{
    printf("%d ", array[i]);
}
return 0;
}

```



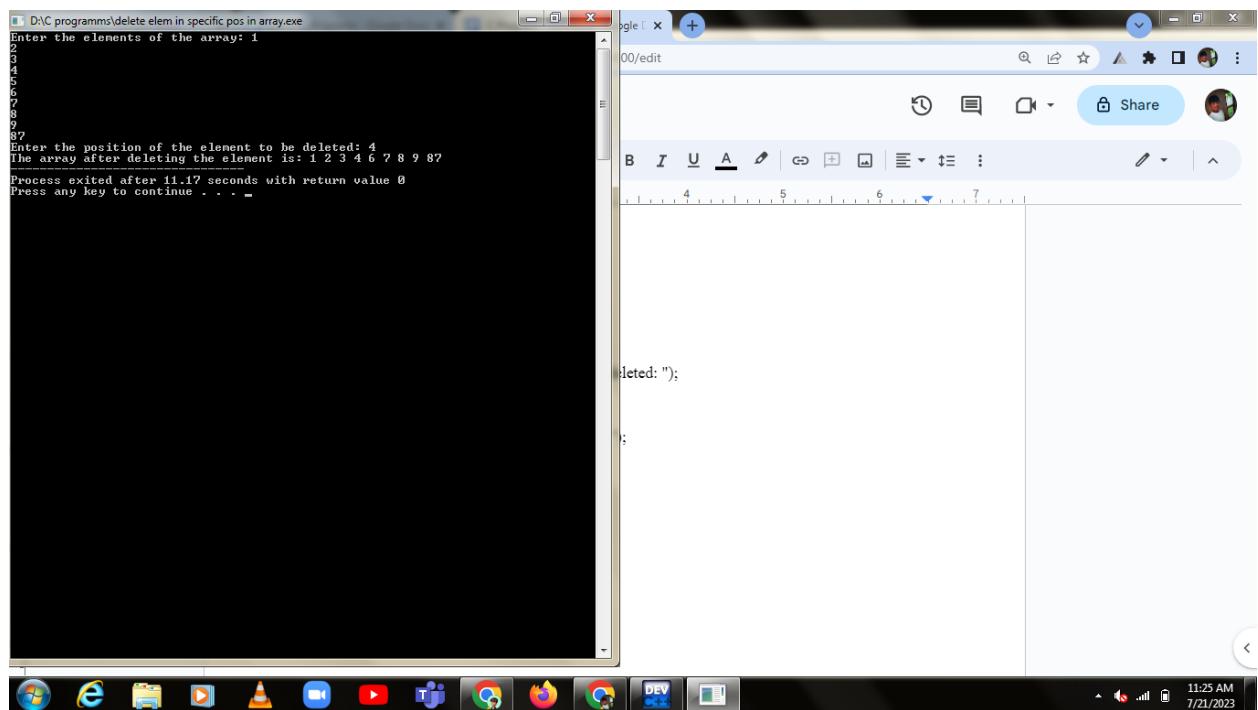
### 88.delete element in specific pos in array

```

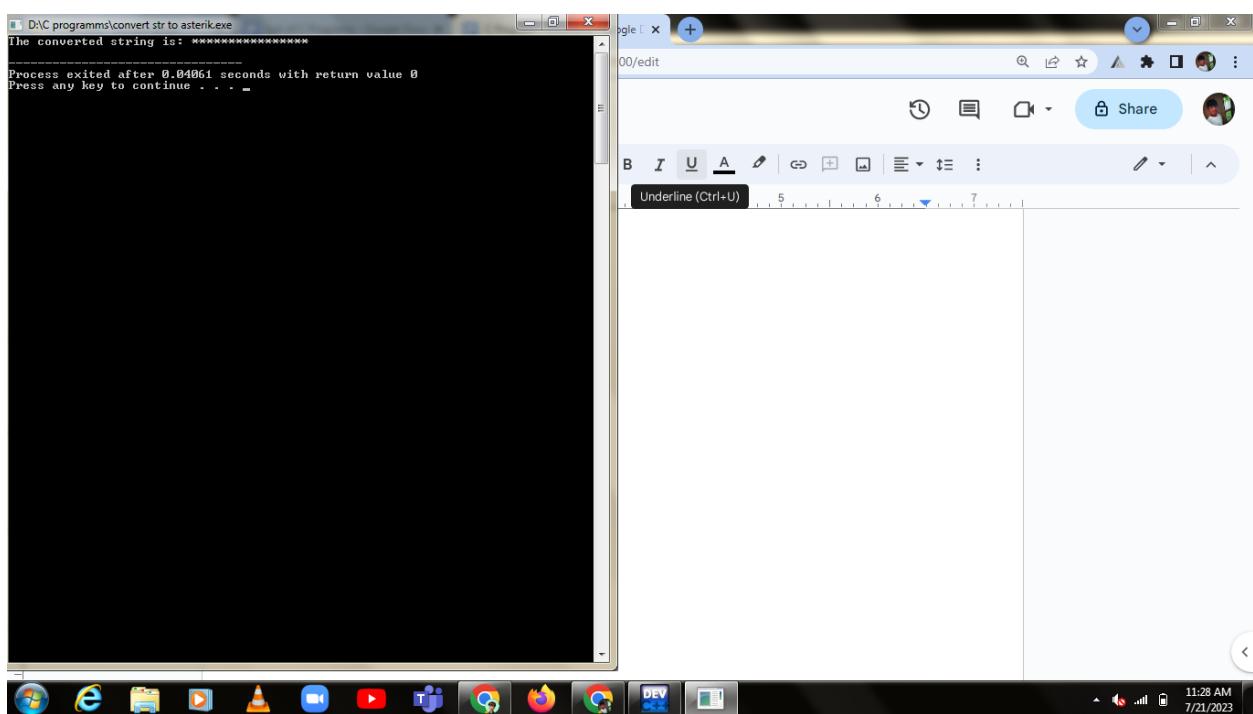
#include <stdio.h>
void delete_element(int *array, int size, int position)
{
    for (int i = position; i < size - 1; i++)
    {
        array[i] = array[i + 1];
    }
}
int main()
{
    int array[10], i, position;

```

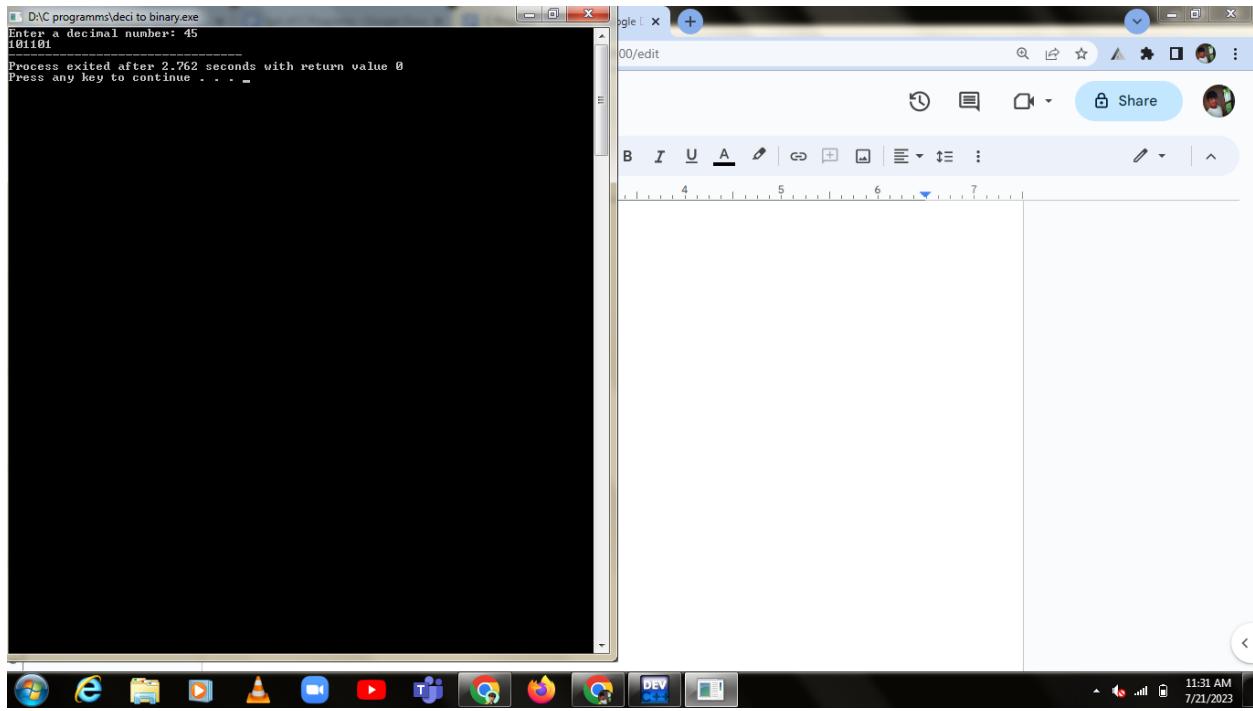
```
printf("Enter the elements of the array: ");
for (i = 0; i < 10; i++)
{
    scanf("%d", &array[i]);
}
printf("Enter the position of the element to be deleted: ");
scanf("%d", &position);
delete_element(array, 10, position);
printf("The array after deleting the element is: ");
for (i = 0; i < 10 - 1; i++)
{
    printf("%d ", array[i]);
}
return 0;
}
```



```
90.convert string to asterik
#include <stdio.h>
void convert_to_asterisk(char *string)
{
    for (int i = 0; string[i] != '\0'; i++)
    {
        string[i] = '*';
    }
}
int main()
{
    char string[] = "This is a string";
    convert_to_asterisk(string);
    printf("The converted string is: %s\n", string);
    return 0;
}
```



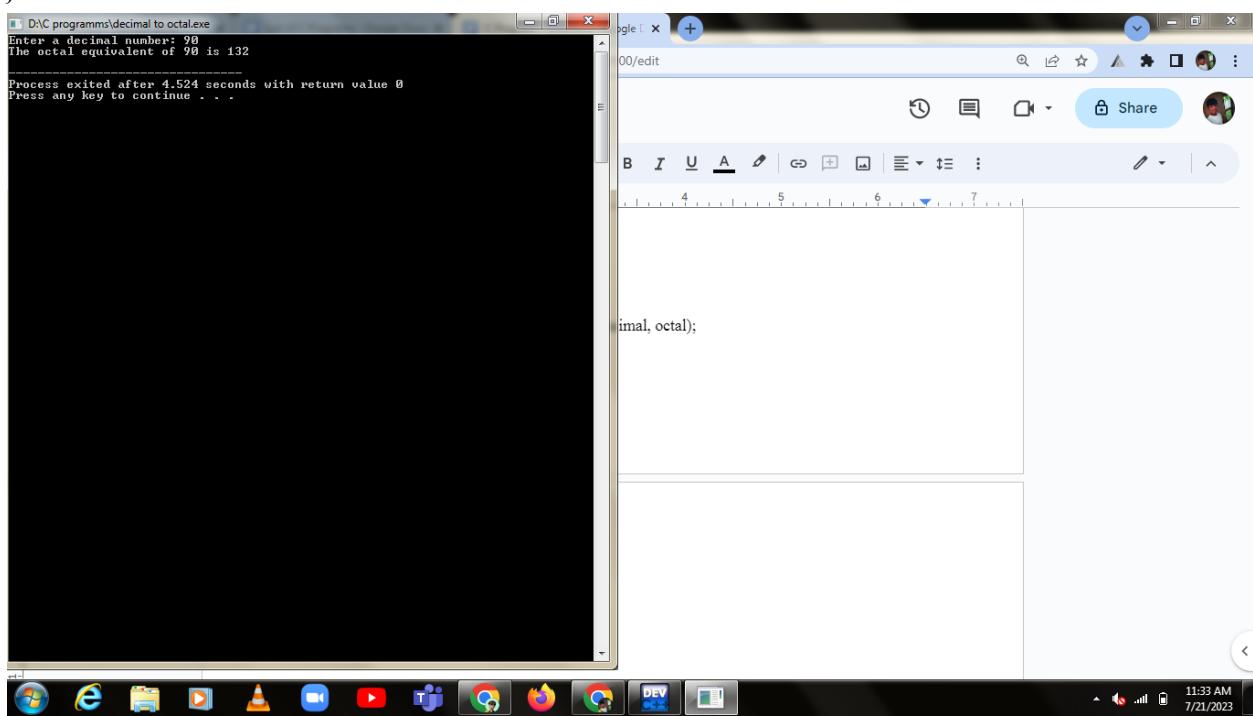
```
91.decimal to binary
#include <stdio.h>
void decimal_to_binary(int decimal)
{
    int binary[32], i = 0;
    while (decimal > 0)
    {
        binary[i++] = decimal % 2;
        decimal >>= 1;
    }
    for (i -= 1; i >= 0; i--)
    {
        printf("%d", binary[i]);
    }
}
int main()
{
    int decimal;
    printf("Enter a decimal number: ");
    scanf("%d", &decimal);
    decimal_to_binary(decimal);
    return 0;
}
```



### 93.decimal to octal

```
#include <stdio.h>
int decimal_to_octal(int decimal)
{
    int octal = 0;
    int i = 1;
    while (decimal != 0)
    {
        octal += (decimal % 8) * i;
        decimal = decimal / 8;
        i = i * 10;
    }
    return octal;
}
int main()
{
    int decimal, octal;
    printf("Enter a decimal number: ");
    scanf("%d", &decimal);
    octal = decimal_to_octal(decimal);
    printf("The octal equivalent of %d is %d\n", decimal, octal);
    return 0;
```

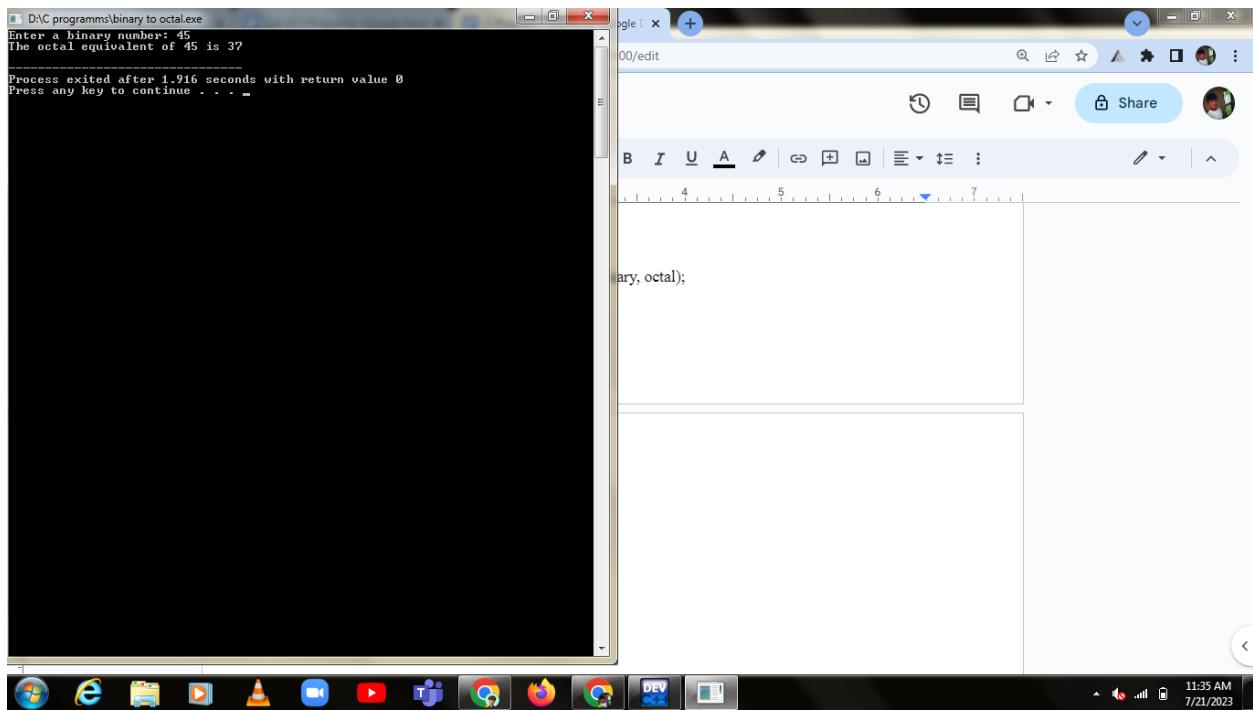
```
}
```



### 95.binary to octal

```
#include <stdio.h>
int binary_to_octal(int binary)
{
    int octal = 0;
    int i = 1;
    while (binary != 0)
    {
        octal += (binary % 10) * i;
        binary = binary / 10;
        i = i * 8;
    }
    return octal;
}
int main()
{
    int binary, octal;
    printf("Enter a binary number: ");
    scanf("%d", &binary);
    octal = binary_to_octal(binary);
    printf("The octal equivalent of %d is %d\n", binary, octal);
```

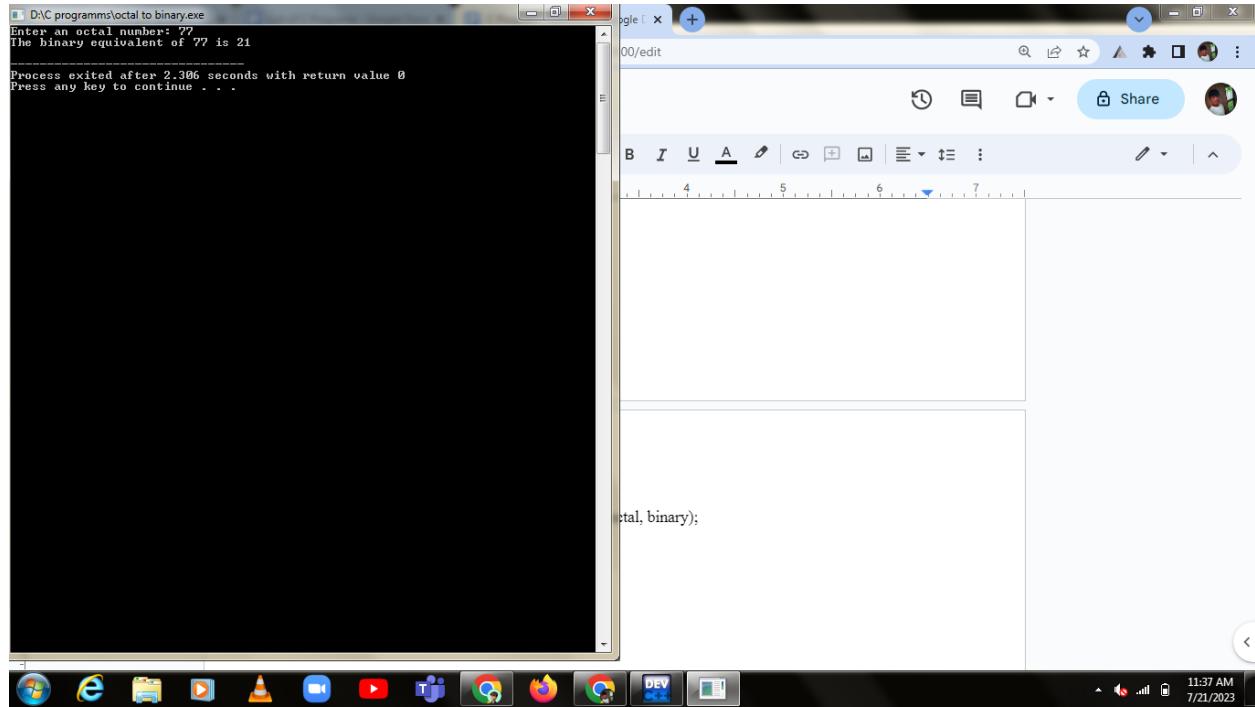
```
return 0;  
}  
}
```



### 97.octal to binary

```
#include <stdio.h>  
int octal_to_binary(int octal)  
{  
    int binary = 0;  
    int i = 1;  
    while (octal != 0)  
    {  
        binary += (octal % 10) * i;  
        octal = octal / 10;  
        i = i * 2;  
    }  
    return binary;  
}  
int main()  
{  
    int octal, binary;  
    printf("Enter an octal number: ");  
    scanf("%d", &octal);  
    binary = octal_to_binary(octal);
```

```
printf("The binary equivalent of %d is %d\n", octal, binary);
return 0;
}
```



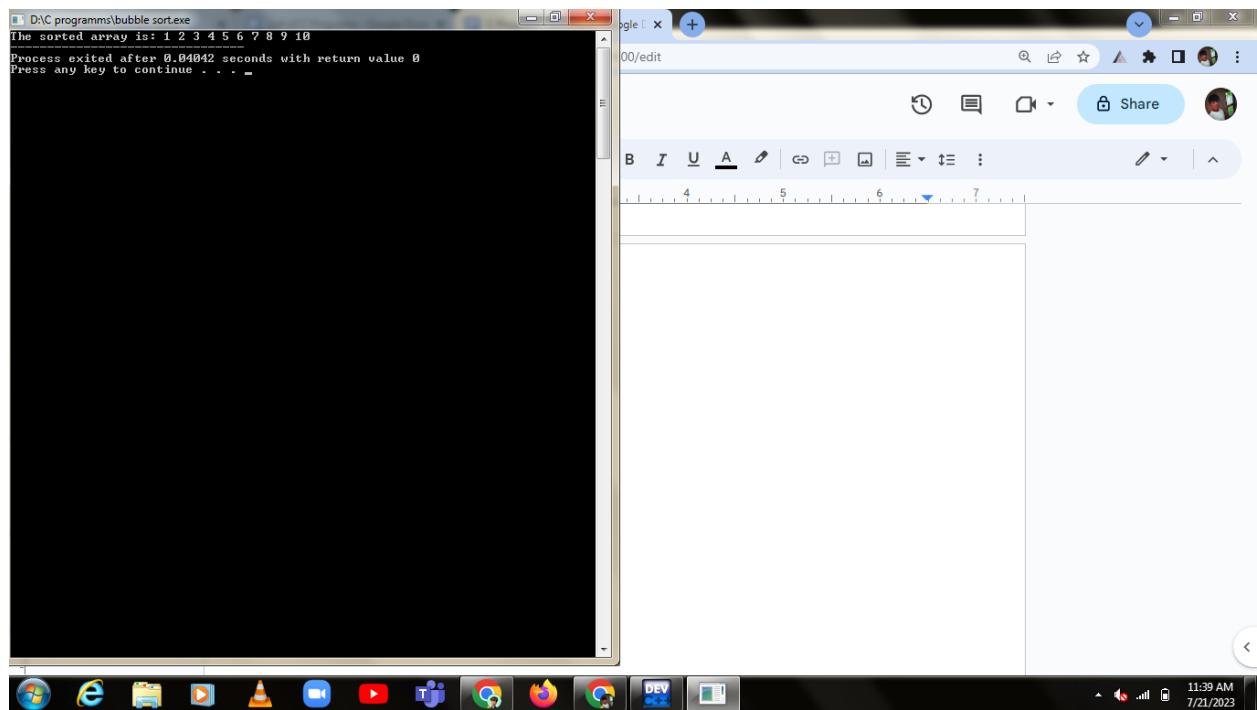
## 99.bubble sort

```
#include <stdio.h>
void bubble_sort(int *array, int size)
{
    int i, j, temp;
    for (i = 0; i < size - 1; i++)
    {
        for (j = 0; j < size - i - 1; j++)
        {
            if (array[j] > array[j + 1])
            {
                temp = array[j];
                array[j] = array[j + 1];
                array[j + 1] = temp;
            }
        }
    }
}
```

```

int main()
{
    int array[] = {10, 5, 2, 1, 8, 9, 7, 6, 4, 3};
    int size = sizeof(array) / sizeof(array[0]);
    bubble_sort(array, size);
    printf("The sorted array is: ");
    for (int i = 0; i < size; i++)
    {
        printf("%d ", array[i]);
    }
    return 0;
}

```



## 100.selection sort

```

#include <stdio.h>
void selection_sort(int *array, int size)
{
    int i, j, min_index, temp;
    for (i = 0; i < size - 1; i++)
    {
        min_index = i;
        for (j = i + 1; j < size; j++)
        {

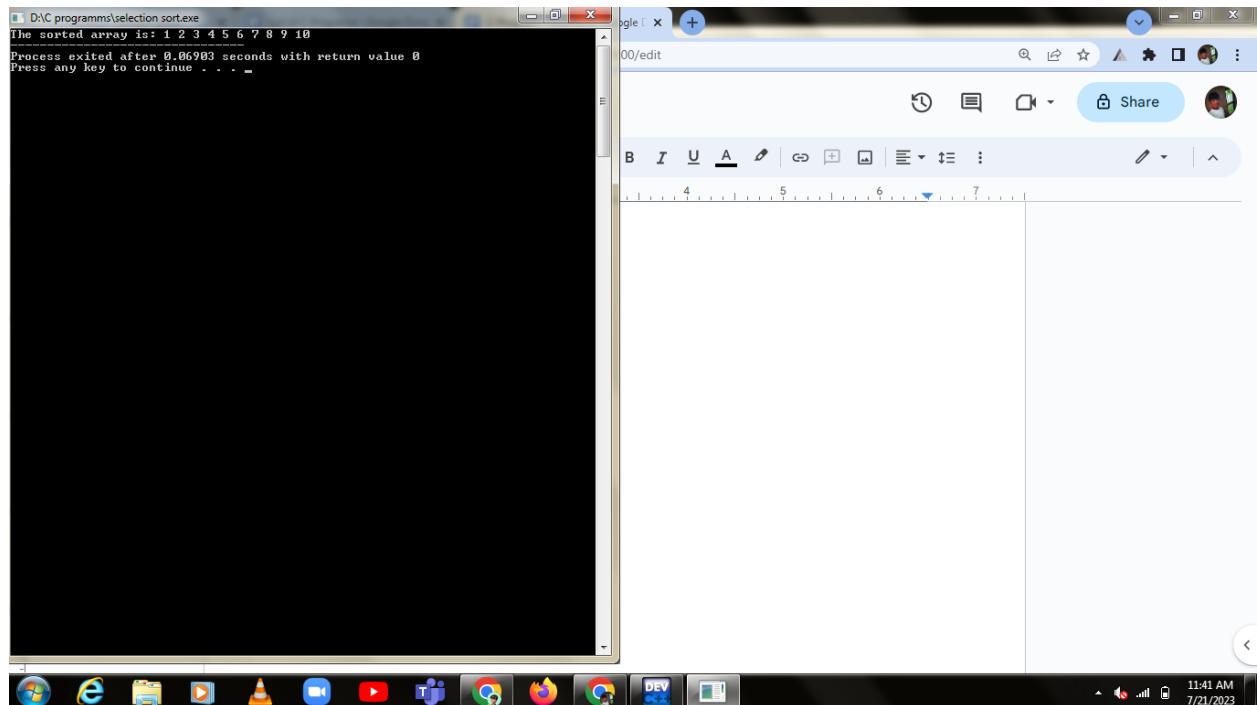
```

```

if (array[j] < array[min_index])
{
    min_index = j;
}
temp = array[i];
array[i] = array[min_index];
array[min_index] = temp;
}
}

int main() {
    int array[] = {10, 5, 2, 1, 8, 9, 7, 6, 4, 3};
    int size = sizeof(array) / sizeof(array[0]);
    selection_sort(array, size);
    printf("The sorted array is: ");
    for (int i = 0; i < size; i++)
    {
        printf("%d ", array[i]);
    }
    return 0;
}

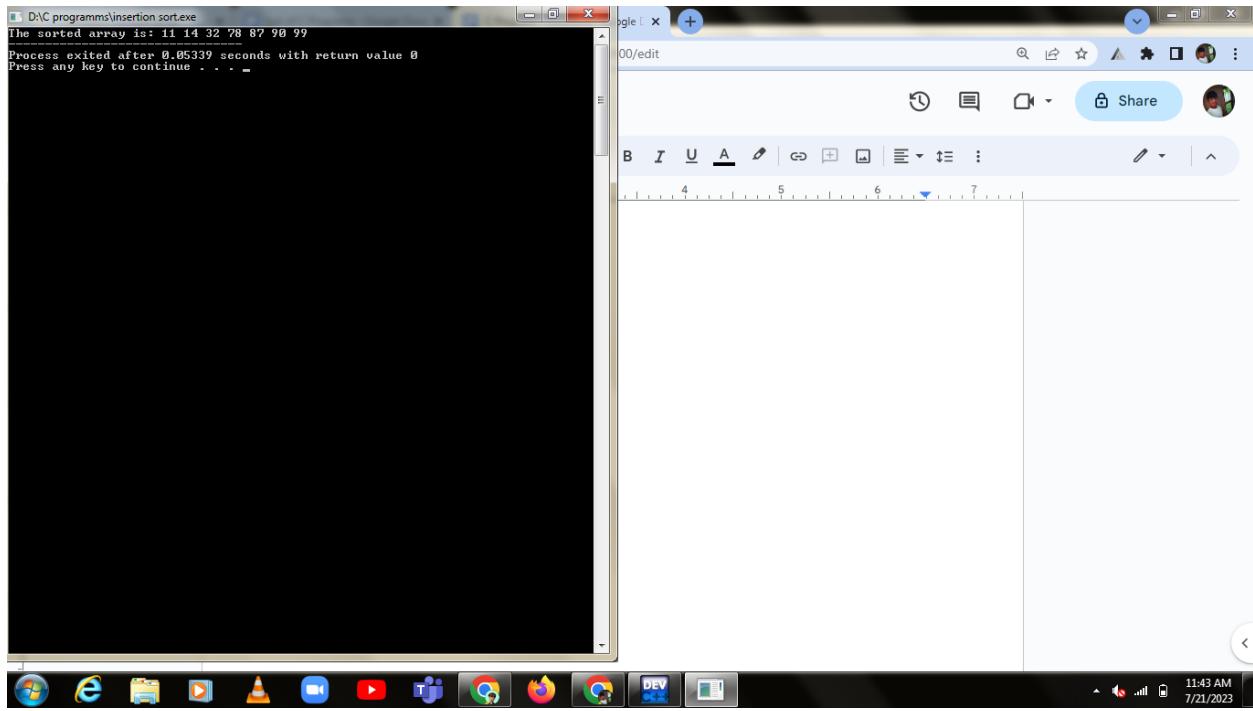
```



## 101.insertion sort

```
#include <stdio.h>
```

```
void insertion_sort(int *array, int size)
{
    int i, j, temp;
    for (i = 1; i < size; i++)
    {
        temp = array[i];
        j = i - 1;
        while (j >= 0 && array[j] > temp)
        {
            array[j + 1] = array[j];
            j--;
        }
        array[j + 1] = temp;
    }
}
int main() {
    int array[] = {90,78,99,32,11,87,14};
    int size = sizeof(array) / sizeof(array[0]);
    insertion_sort(array, size);
    printf("The sorted array is: ");
    for (int i = 0; i < size; i++)
    {
        printf("%d ", array[i]);
    }
    return 0;
}
```



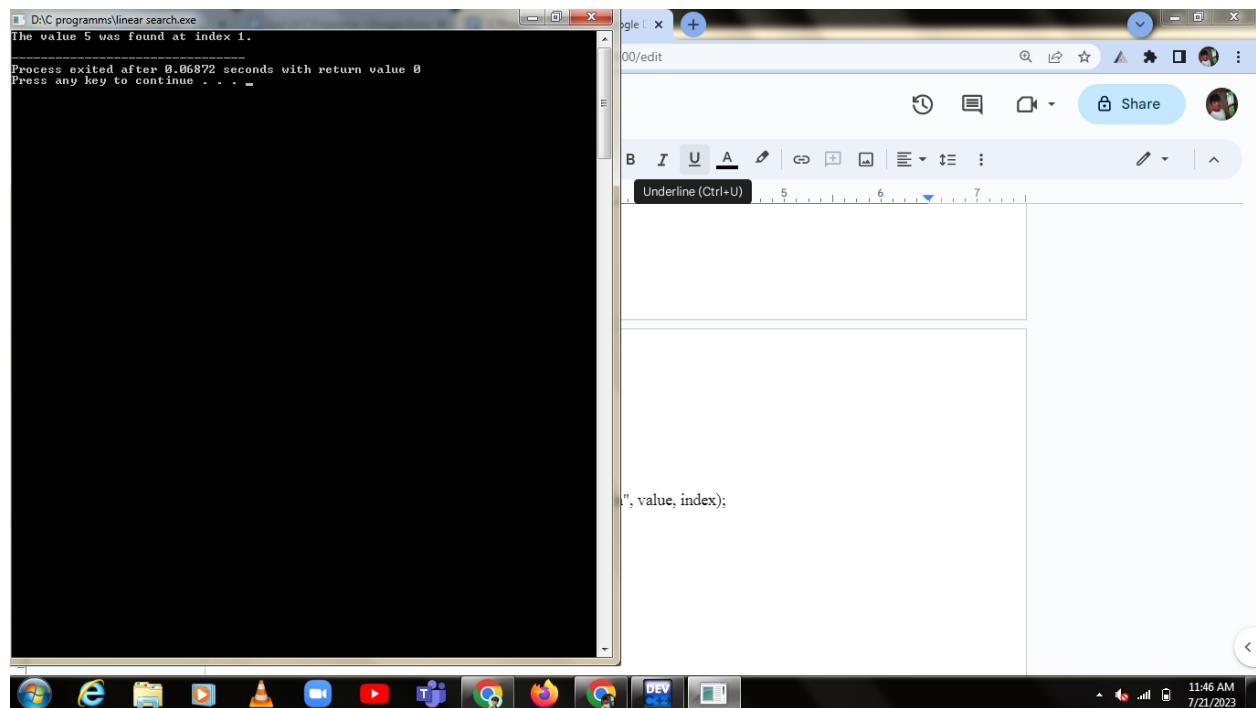
## 102.linear search

```
#include <stdio.h>
int linear_search(int *array, int size, int value)
{
    for (int i = 0; i < size; i++)
    {
        if (array[i] == value)
        {
            return i;
        }
    }
    return -1;
}
int main()
{
    int array[] = {10, 5, 2, 1, 8, 9, 7, 6, 4, 3};
    int size = sizeof(array) / sizeof(array[0]);
    int value = 5;
    int index = linear_search(array, size, value);
    if (index == -1)
    {
        printf("The value %d was not found in the array.\n", value);
    }
}
```

```

    }
else
{
    printf("The value %d was found at index %d.\n", value, index);
}
return 0;
}

```



## 105.binary search

```

#include <stdio.h>
int binary_search(int *array, int size, int value)
{
    int low = 0;
    int high = size - 1;
    int mid;
    while (low <= high)
    {
        mid = (low + high) / 2;
        if (array[mid] == value)
        {
            return mid;
        } else if (array[mid] < value)
        {

```

```

        low = mid + 1;
    } else {
        high = mid - 1;
    }
}
return -1;
}
int main()
{
    int array[] = {10, 5, 2, 1, 8, 9, 7, 6, 4, 3};
    int size = sizeof(array) / sizeof(array[0]);
    int value = 5;
    int index = binary_search(array, size, value);
    if (index == -1)
    {
        printf("The value %d was not found in the array.\n", value);
    }
    else
    {
        printf("The value %d was found at index %d.\n", value, index);
    }
    return 0;
}

```

