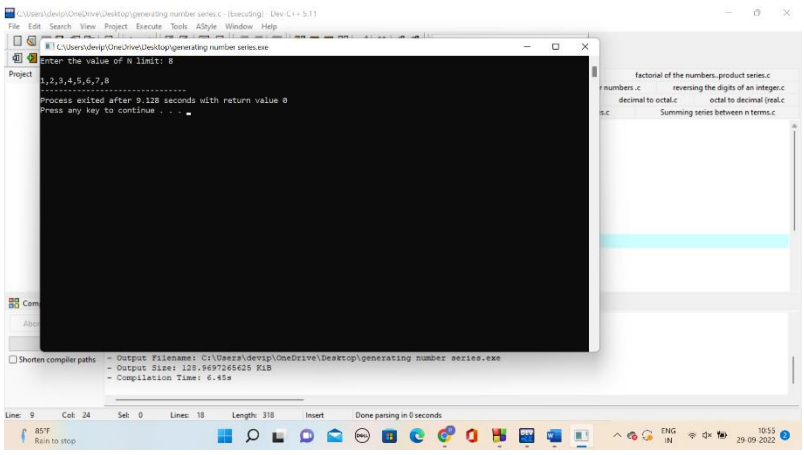
1.Genaration of number series 1,2,3,4,….n

PROGRAM`

```
#include<stdio.h>
#include<conio.h>
int main()
{
   int N, i;
   printf("Enter the value of N limit: ");
   scanf("%d", &N);
   printf("\n");
   for(i=1; i<=N; i++)
   {
      if(i==N)
         printf("%d", i);
      else
         printf("%d,", i);
   }
   getch();
   return 0;
}
```

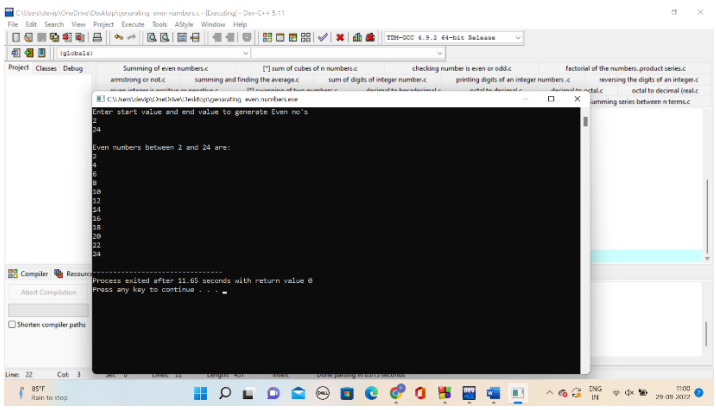
OUTPUT



2. Generation of even number series 2,4,6,8……n

PROGRAM`

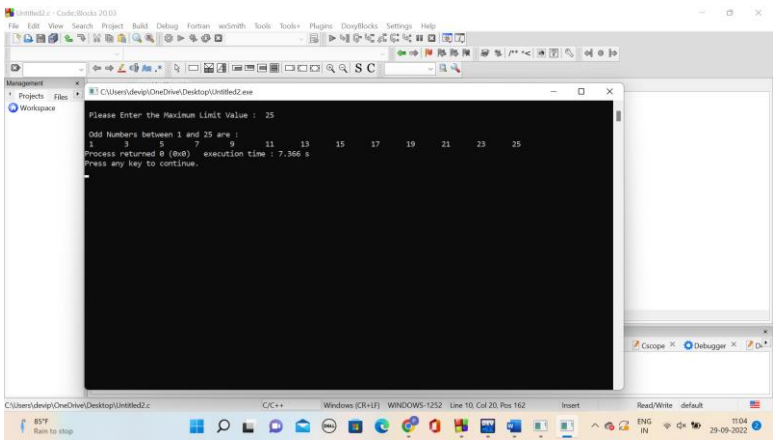
```
#include<stdio.h>


int main()
{
   int count, limit;


   printf("Enter start value and end value to generate Even no's\n");
   scanf("%d%d", &count, &limit);


   printf("\nEven numbers between %d and %d are:\n", count, limit);


   while(count <= limit)
   {
      if(count % 2 == 0)
      {
         printf("%d\n", count);
      }
      count++;
   }


   return 0;
}
```



3.Generation of odd numbers 1,3,5,7,....n

PROGRAM`

```
#include<stdio.h>

int main()
{
	int i, number;

	printf("\n Please Enter the Maximum Limit Value :  ");
	scanf("%d", &number);

	printf("\n Odd Numbers between 1 and %d are : \n", number);
	for(i = 1; i <= number; i++)
	{
	if ( i % 2 != 0 )
	{
			printf(" %d\t", i);
	}
	}

	return 0;
}
```

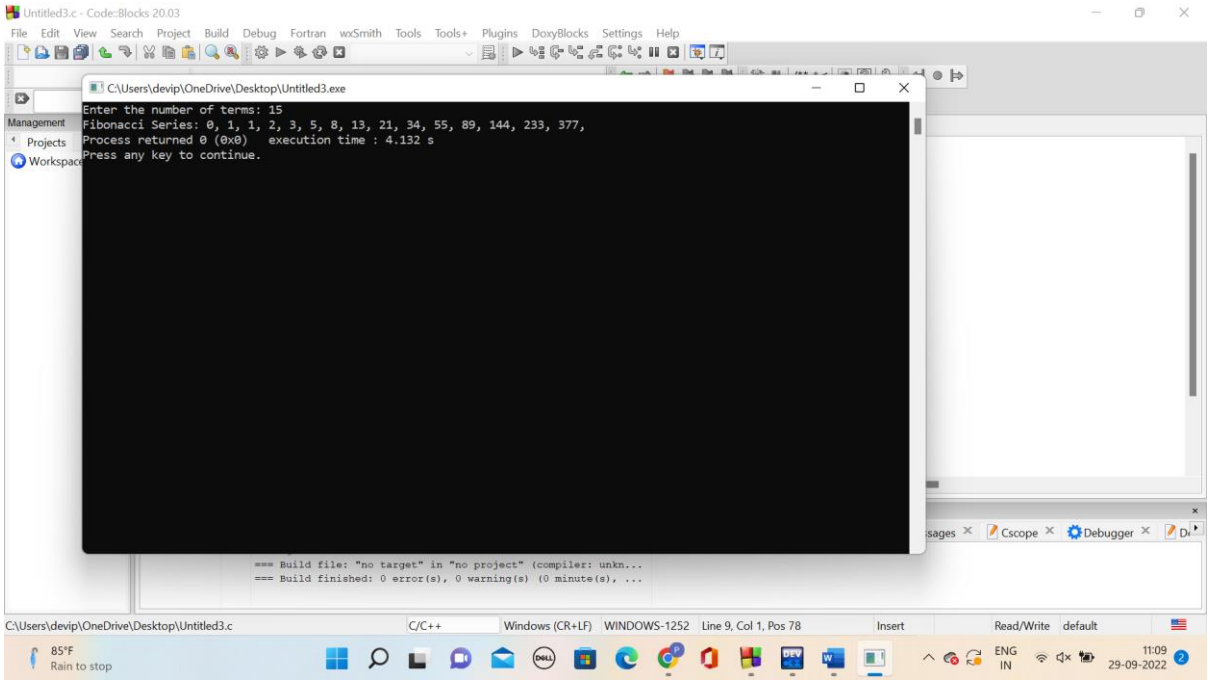


4.Generation of fibanacci series 1,1,2,3,5,8,….n

PROGRAM`

```
#include <stdio.h>
int main() {

  int i, n;


  int t1 = 0, t2 = 1;


  int nextTerm = t1 + t2;


  printf("Enter the number of terms: ");
  scanf("%d", &n);


  printf("Fibonacci Series: %d, %d, ", t1, t2);


  for (i = 3; i <= n; ++i) {
    printf("%d, ", nextTerm);
    t1 = t2;
    t2 = nextTerm;
    nextTerm = t1 + t2;
  }

  return 0;
}
```

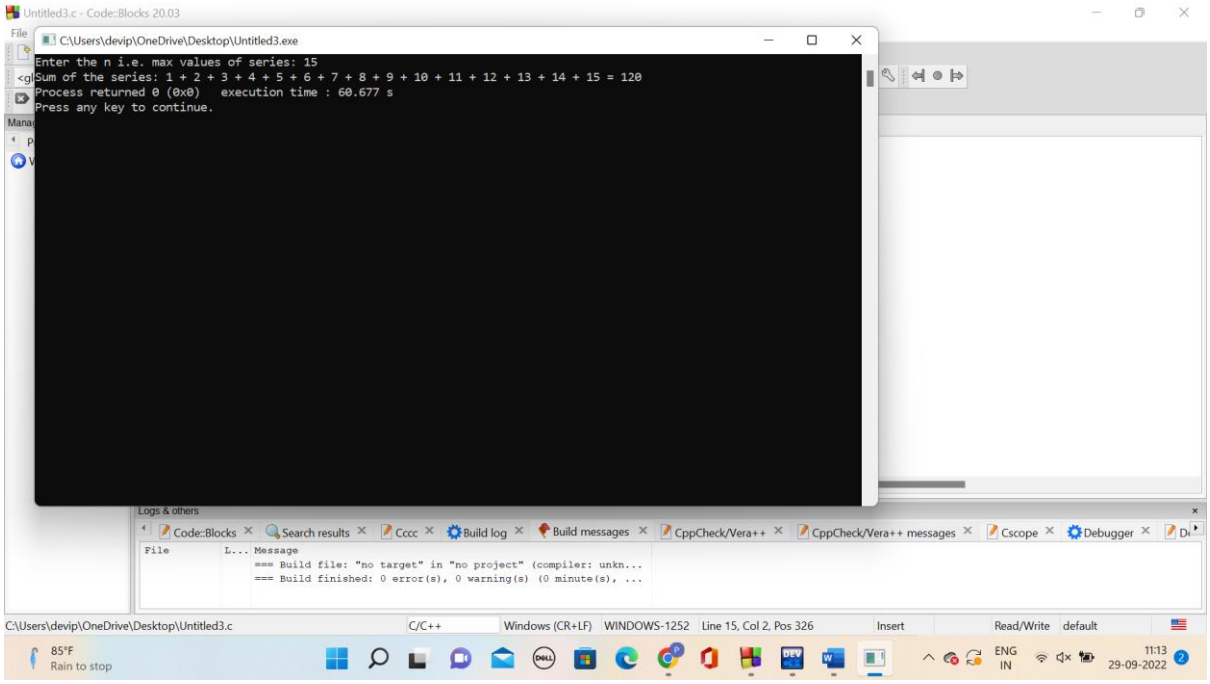
OUTPUT



5. Summing series 1+2+3+4…..+n.

PROGRAM`

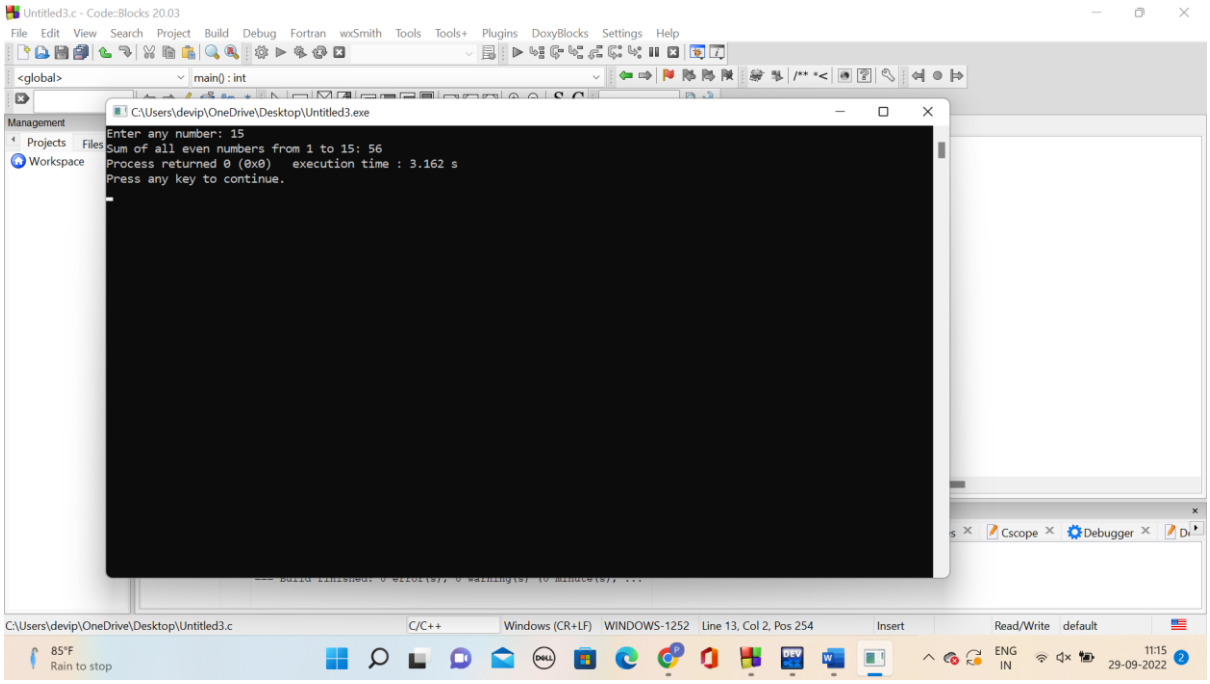
```
#include<stdio.h>
int main() {
        int n,i;
        int sum=0;
        printf("Enter the n i.e. max values of series: ");
        scanf("%d",&n);
        sum = (n * (n + 1)) / 2;
        printf("Sum of the series: ");
        for (i =1;i <= n;i++) {
                if (i!=n)
                        printf("%d + ",i); else
                        printf("%d = %d ",i,sum);
        }
        return 0;
}
```



6. Summing of even numbers.

PROGRAM`

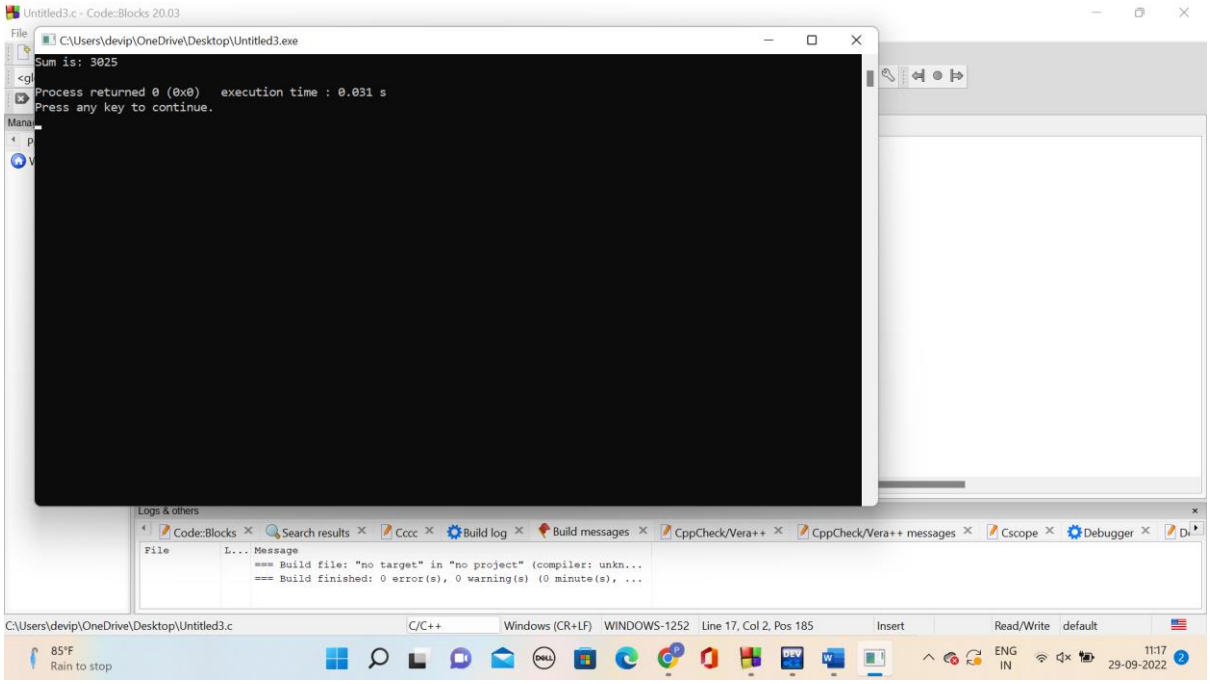
```
#include <stdio.h>
int main()
{
   int i, n, sum=0;
   printf("Enter any number: ");
   scanf("%d", &n);
   for(i=2; i<=n; i+=2)
   {
      sum += i;
   }
   printf("Sum of all even numbers from 1 to %d: %d", n, sum);
   return 0;
}
```



7. Summing of cubes of n numbers

PROGRAM

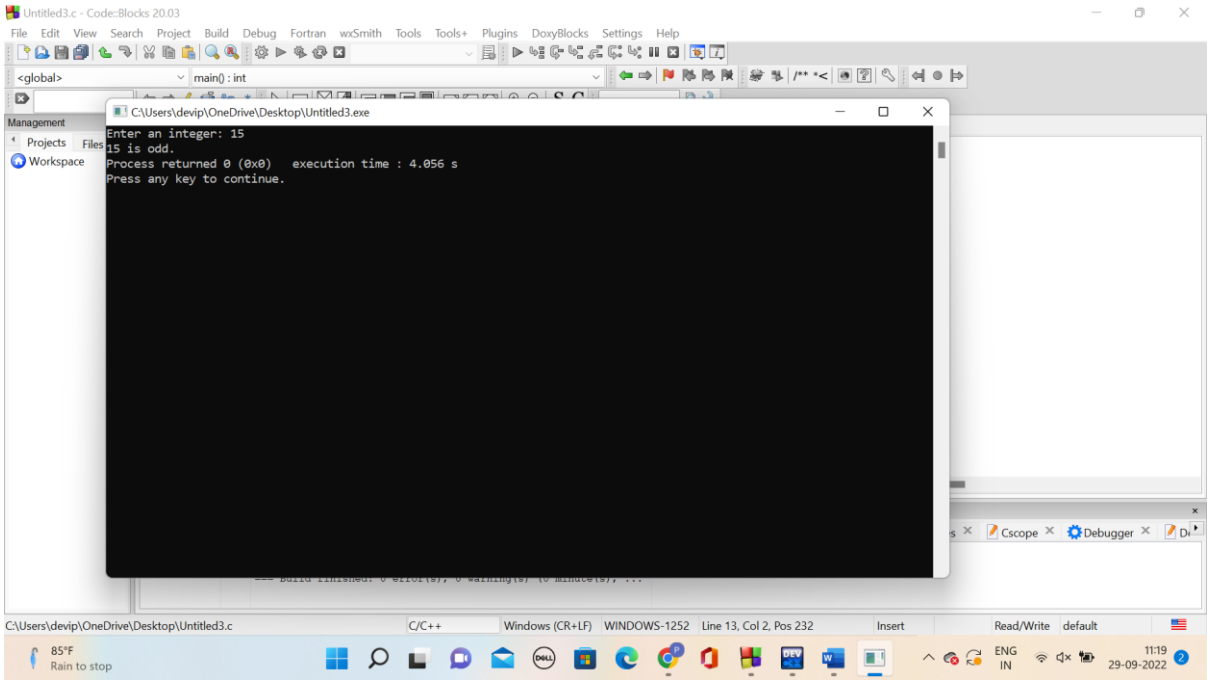
```
#include <stdio.h>


int main ()
{
  int n = 10;
  int i = 1;
  int sum = 0;


  while(i <= n)
{
    sum += i*i*i;
    i++;
}


  printf("Sum is: %i\n", sum);
  return 0;
}
```



8. Finding whether the guven integer is odd or even

PROGRAM

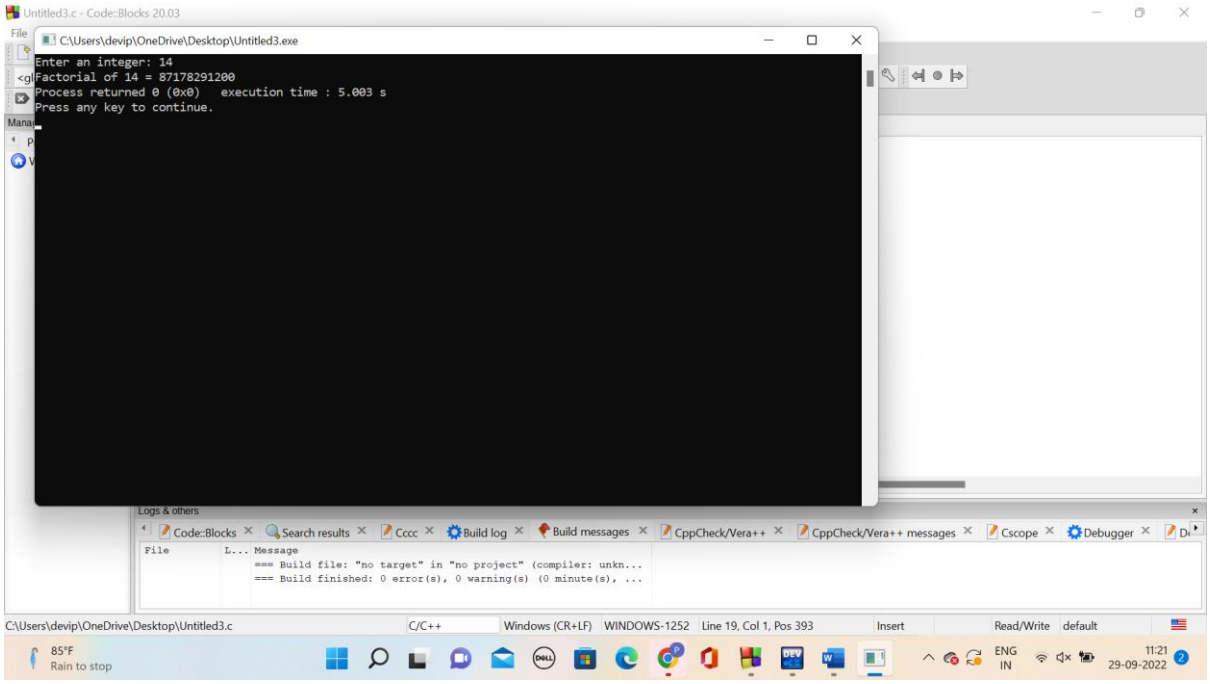
```
#include <stdio.h>
int main() {
    int num;
    printf("Enter an integer: ");
    scanf("%d", &num);

    if(num % 2 == 0)
        printf("%d is even.", num);
    else
        printf("%d is odd.", num);

    return 0;
}
```



9. Product series or factorial of a number

PROGRAM

```
#include <stdio.h>
int main() {
    int n, i;
    unsigned long long fact = 1;
    printf("Enter an integer: ");
    scanf("%d", &n);

    if (n < 0)
        printf("Error! Factorial of a negative number doesn't exist.");
    else {
        for (i = 1; i <= n; ++i) {
            fact *= i;
        }
        printf("Factorial of %d = %llu", n, fact);
    }

    return 0;
}
```

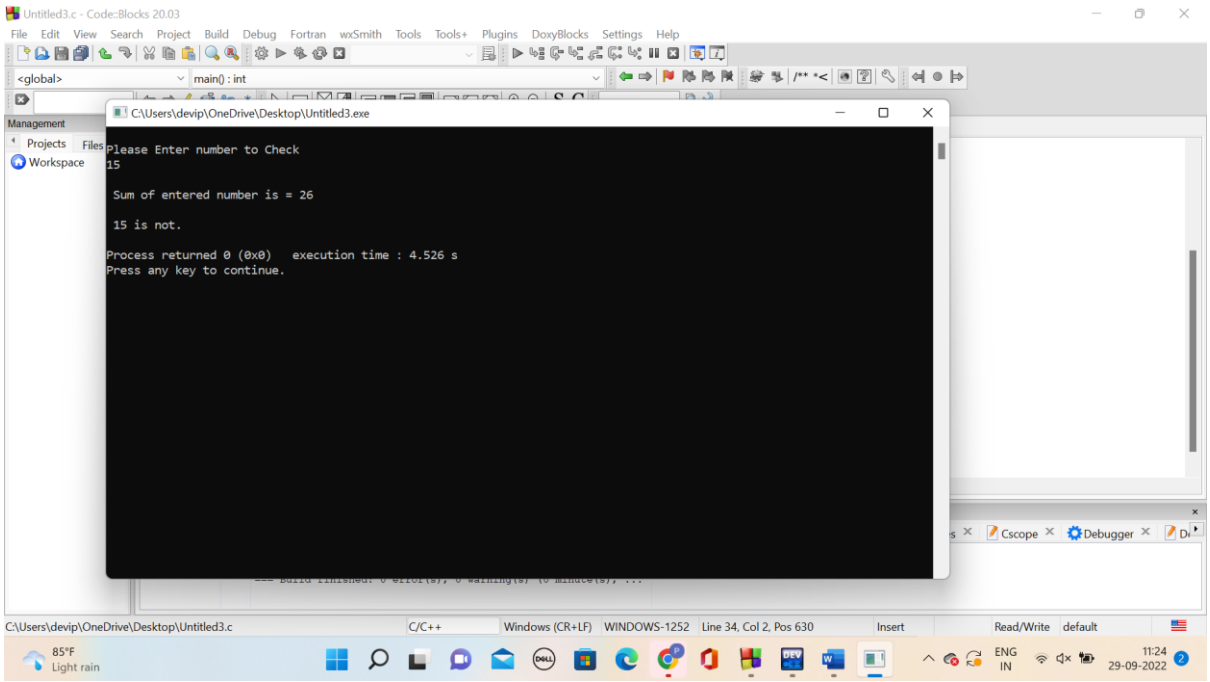


10. Finding the given number is Armstrong or not

PROGRAM

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

int main()
{
  int Number, Temp, Reminder, Times =0, Sum = 0;

  printf("\nPlease Enter number to Check \n");
  scanf("%d", &Number);

  Temp = Number;
  while (Temp != 0)
  {
     Times = Times + 1;
     Temp = Temp / 10;
  }

  Temp = Number;
```

```
 while( Temp > 0)
 {
   Reminder = Temp %10;
   Sum = Sum + pow(Reminder, Times);
   Temp = Temp /10;
 }

 printf("\n Sum of entered number is = %d\n", Sum);

 if ( Number == Sum )
    printf("\n %d is Armstrong Number.\n", Number);
 else
    printf("\n %d is not.\n", Number);

 return 0;
}
```

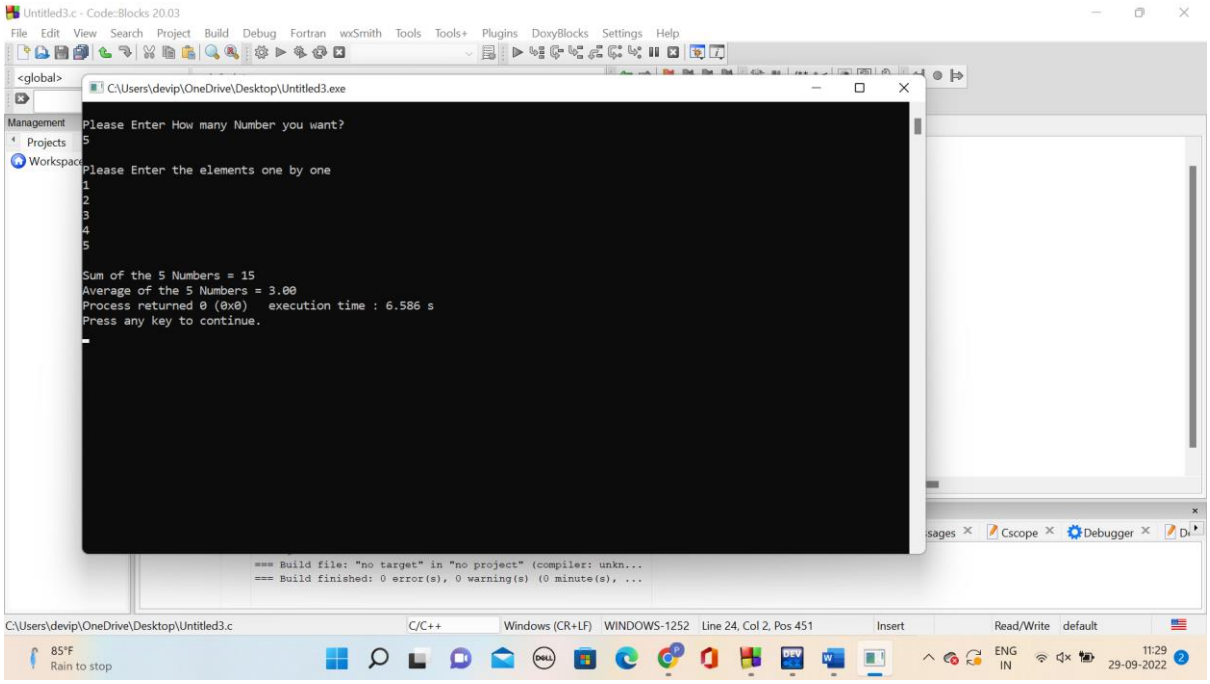


11. Summing of an integer and finding average

PROGRAM

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

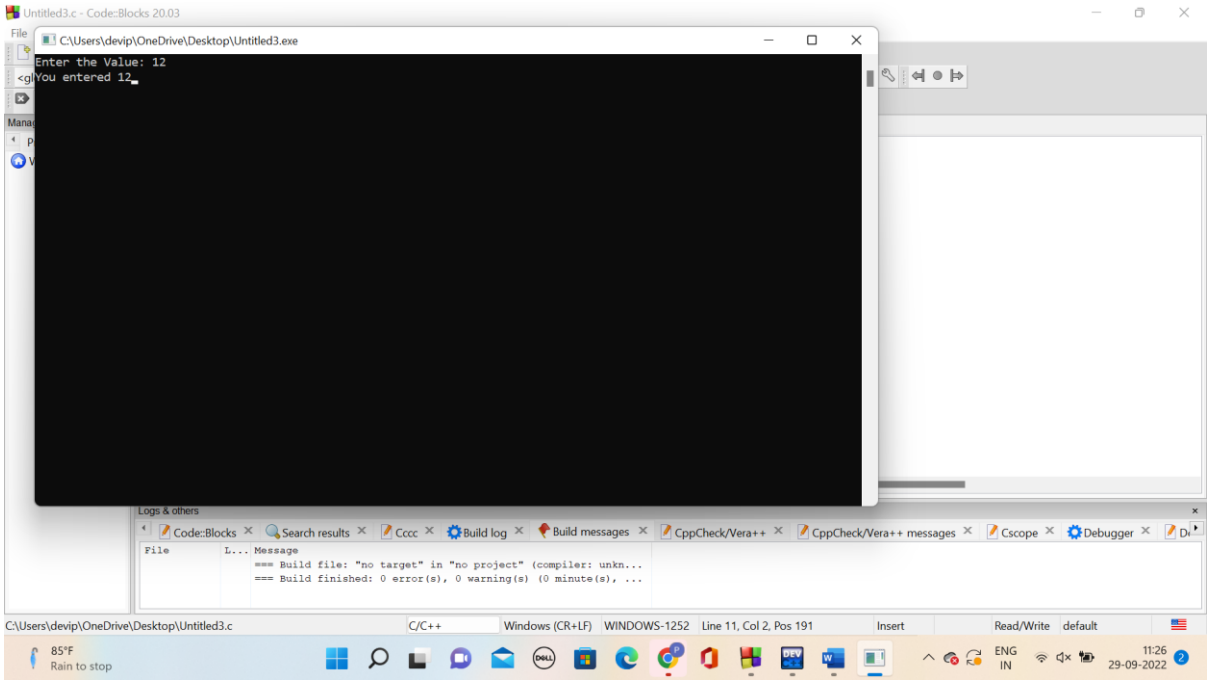
```
int main()
{
  int i,n,Sum=0,numbers;
  float Average;

  printf("\nPlease Enter How many Number you want?\n");
  scanf("%d",&n);

  printf("\nPlease Enter the elements one by one\n");
  for(i=0;i<n;++i)
   {
     scanf("%d",&numbers);
     Sum = Sum +numbers;
   }

  Average = Sum/n;

  printf("\nSum of the %d Numbers = %d",n, Sum);
  printf("\nAverage of the %d Numbers = %.2f",n, Average);

  return 0;
}
```



12. Printing the digits of an integer number

PROGRAM

```
#include<stdio.h>
#include<conio.h>
int main()
{
   int val;
   printf("Enter the Value: ");
   scanf("%d", &val);
   printf("You entered %d", val);
   getch();
   return 0;
}
```

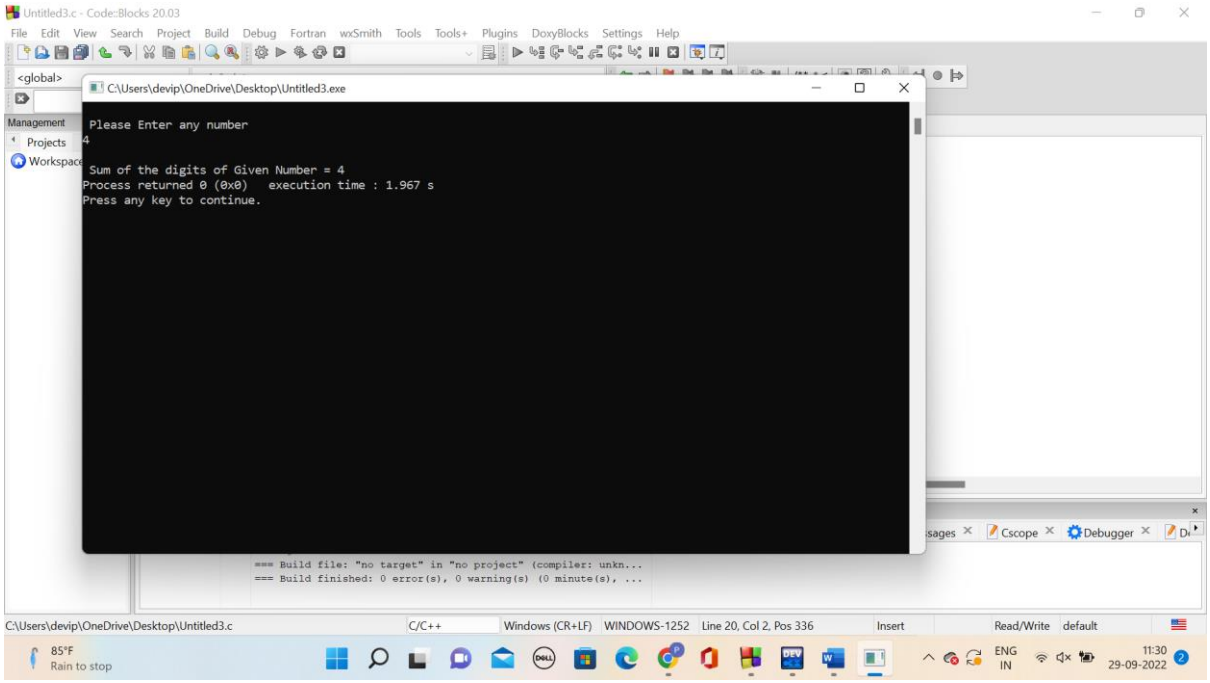


13. Summing of the digits of an interger number

PROGRAM

```
#include <stdio.h>

int main()
{
  int Number, Reminder, Sum=0;

  printf("\n Please Enter any number\n");
  scanf("%d", &Number);

  while(Number > 0)
  {
     Reminder = Number % 10;
     Sum = Sum+ Reminder;
     Number = Number / 10;
  }

  printf("\n Sum of the digits of Given Number = %d", Sum);
```

```
  return 0;
}
```

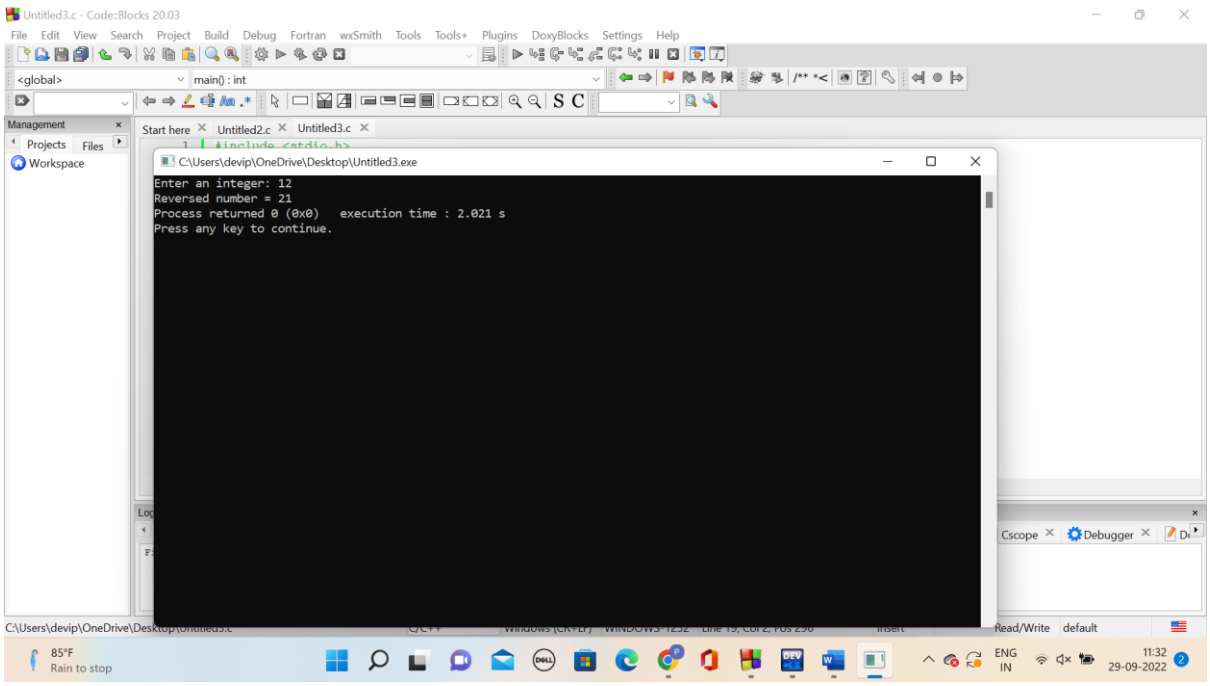


14. Reversing the digits of an integer number

PROGRAM

```
#include <stdio.h>

int main() {

  int n, reverse = 0, remainder;

  printf("Enter an integer: ");
  scanf("%d", &n);

  while (n != 0) {
    remainder = n % 10;
    reverse = reverse * 10 + remainder;
    n /= 10;
  }
```

```
  printf("Reversed number = %d", reverse);

  return 0;
}
```

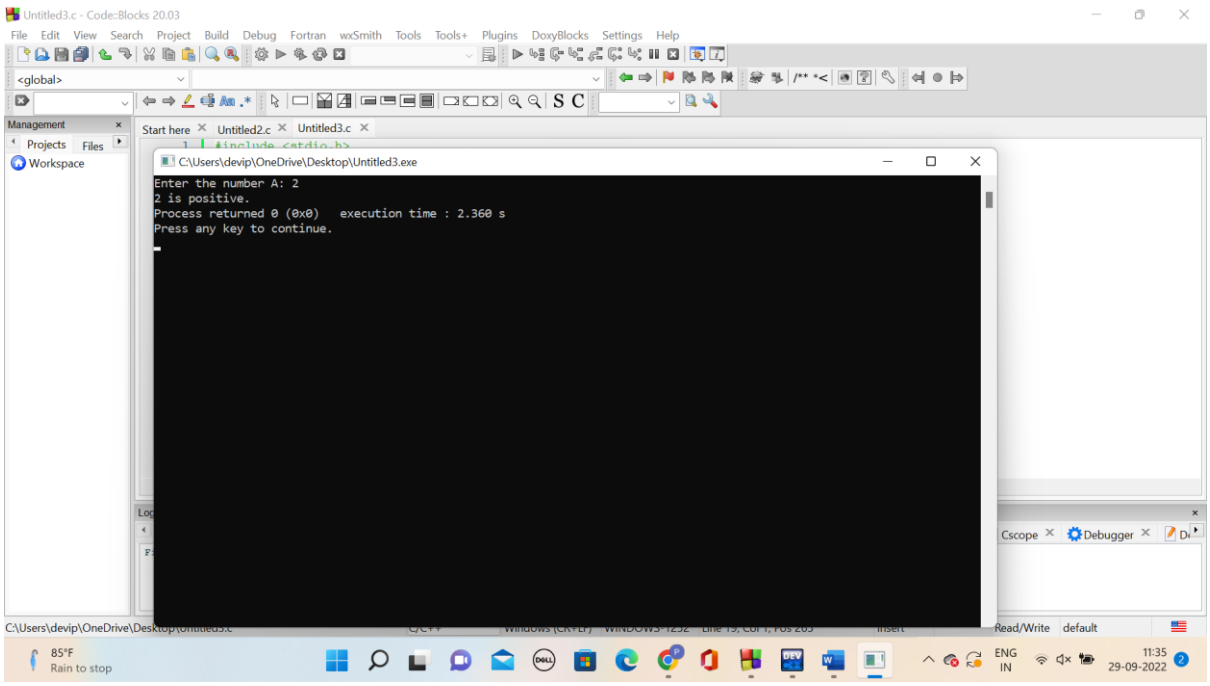


15. Finding the given numbers is +ve or negative.

PROGRAM

```
#include <stdio.h>

int main()
{
        int A;

        printf("Enter the number A: ");
        scanf("%d", &A);

        if (A > 0)
                printf("%d is positive.", A);
        else if (A < 0)
                printf("%d is negative.", A);
```

```
        else if (A == 0)
                printf("%d is zero.", A);

        return 0;
}
```

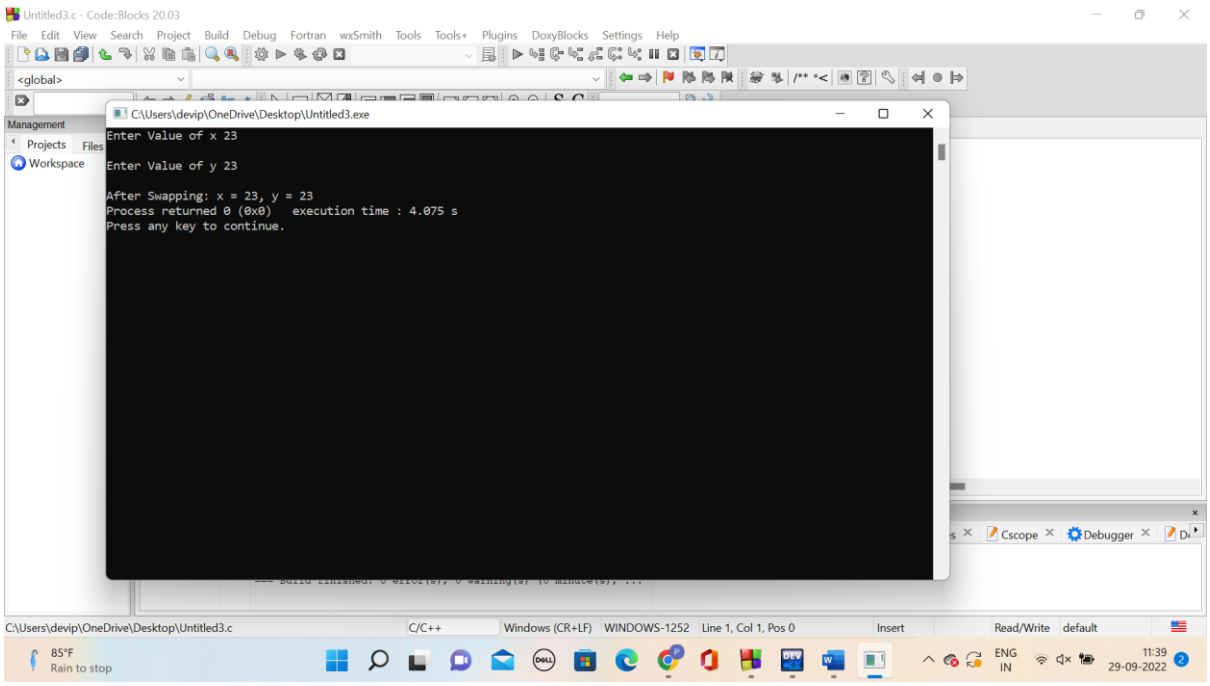


16. Swapping two numbers with a temporary variable

PROGRAM

```
#include <stdio.h>

int main()
{
        int x, y;
        printf("Enter Value of x ");
        scanf("%d", &x);
        printf("\nEnter Value of y ");
        scanf("%d", &y);

        int temp = x;
        x = y;
```

```
        y = temp;

        printf("\nAfter Swapping: x = %d, y = %d", x, y);
        return 0;
}
```

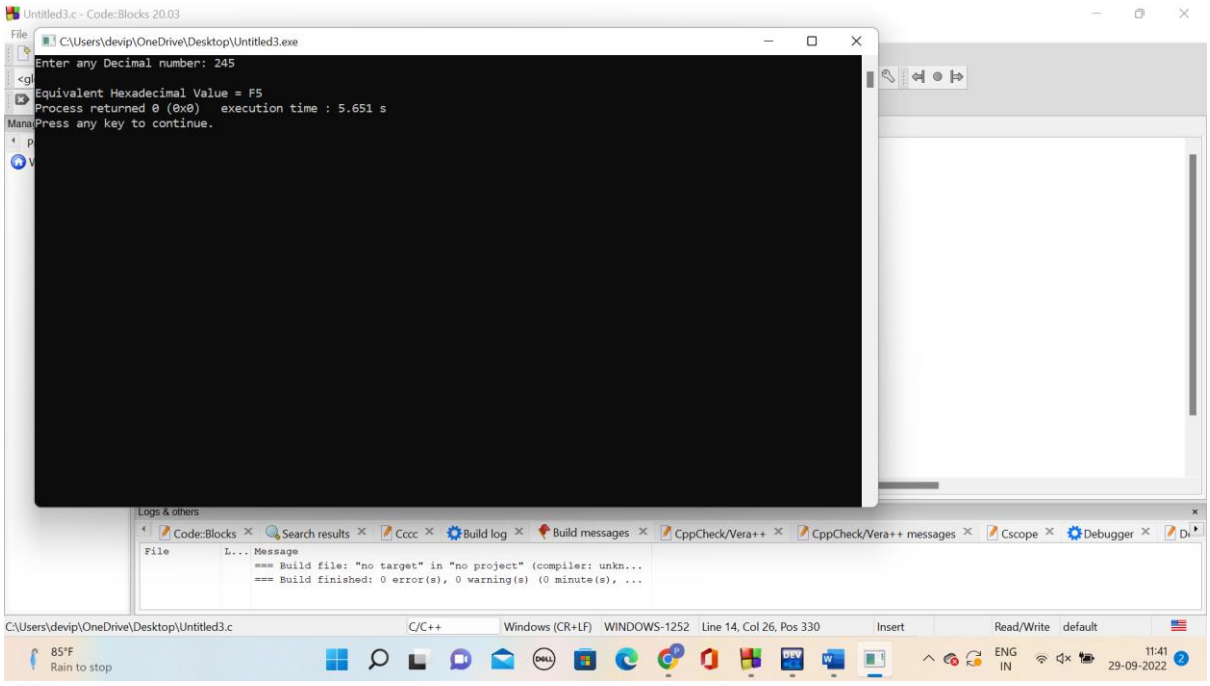


17. Conversion of decimal to hexadecimal

PROGRAM

```
#include<stdio.h>
#include<conio.h>
int main()
{
   int decnum, hexnum[50], temp, chck, i=0, rem;
   printf("Enter any Decimal number: ");
   scanf("%d", &decnum);
   while(decnum!=0)
   {
      temp = decnum/16;
      chck = temp*16;
      rem = decnum - chck;
      if(rem<10)
```

```
        rem = rem+48;
      else
        rem = rem+55;
      hexnum[i] = rem;
      i++;
      decnum = temp;
   }
   printf("\nEquivalent Hexadecimal Value = ");
   for(i=i-1; i>=0; i--)
      printf("%c", hexnum[i]);
   getch();
   return 0;
}
```



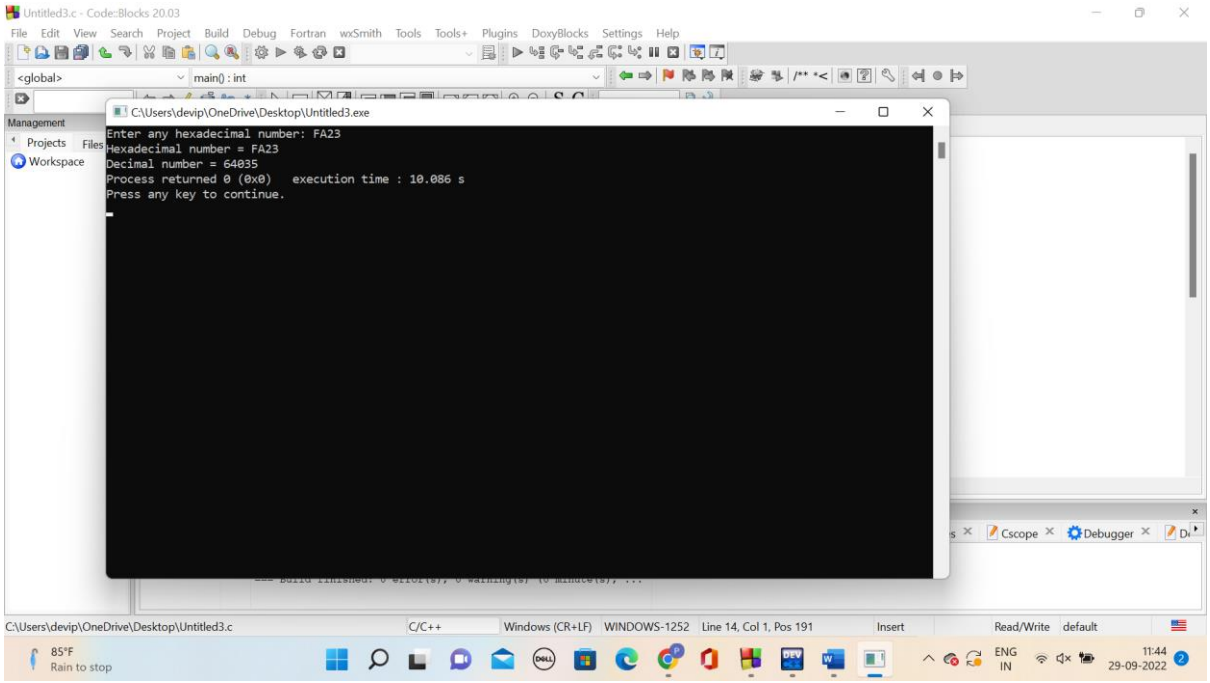
18. Conversion of hexadecimal to decimal

PROGRAM

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

```
int main()
{
    char hex[17];
    long long decimal, place;
    int i = 0, val, len;

    decimal = 0;
    place = 1;


    printf("Enter any hexadecimal number: ");
    gets(hex);


    len = strlen(hex);
    len--;


    for(i=0; hex[i]!='\0'; i++)
    {


        if(hex[i]>='0' && hex[i]<='9')
        {
            val = hex[i] - 48;
        }
        else if(hex[i]>='a' && hex[i]<='f')
        {
            val = hex[i] - 97 + 10;
        }
        else if(hex[i]>='A' && hex[i]<='F')
        {
```

```
            val = hex[i] - 65 + 10;
        }

        decimal += val * pow(16, len);
        len--;
    }

    printf("Hexadecimal number = %s\n", hex);
    printf("Decimal number = %lld", decimal);

    return 0;
}
```

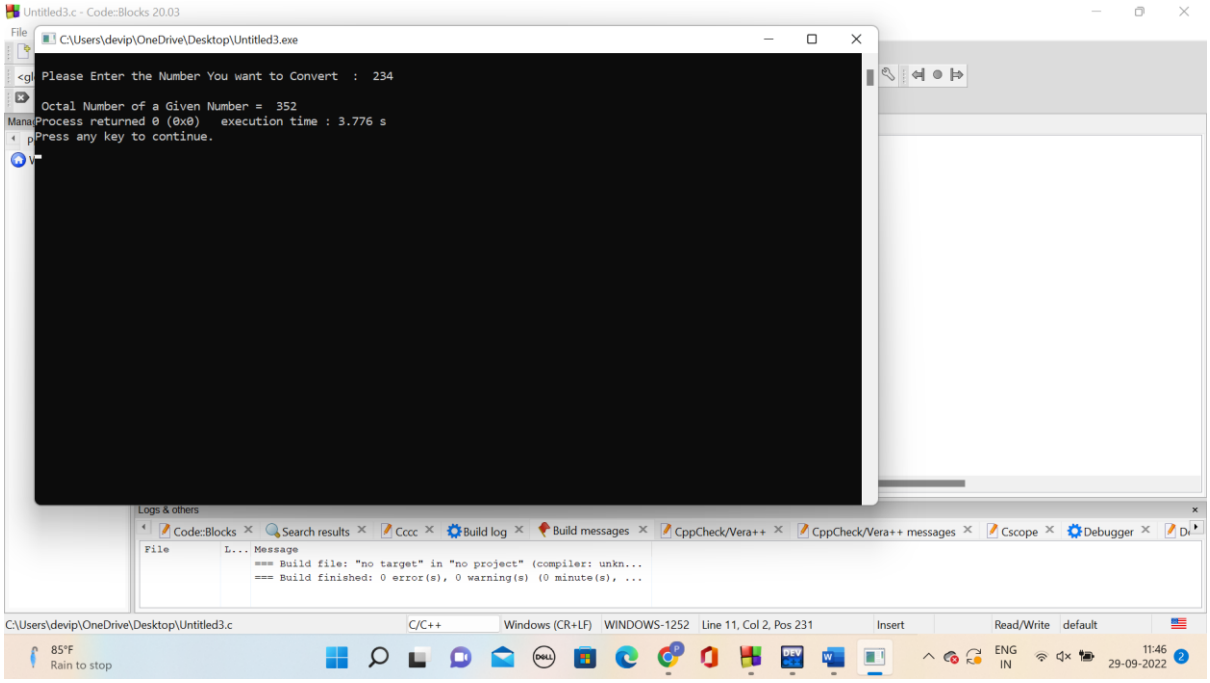


19. Conversion of decimal to octal

PROGRAM

```
#include <stdio.h>
int main()
{
    int number;
    printf("\n Please Enter the Number You want to Convert  :  ");
    scanf("%d", &number);
```

```
    printf("\n Octal Number of a Given Number =  %o", number);

    return 0;
}
```

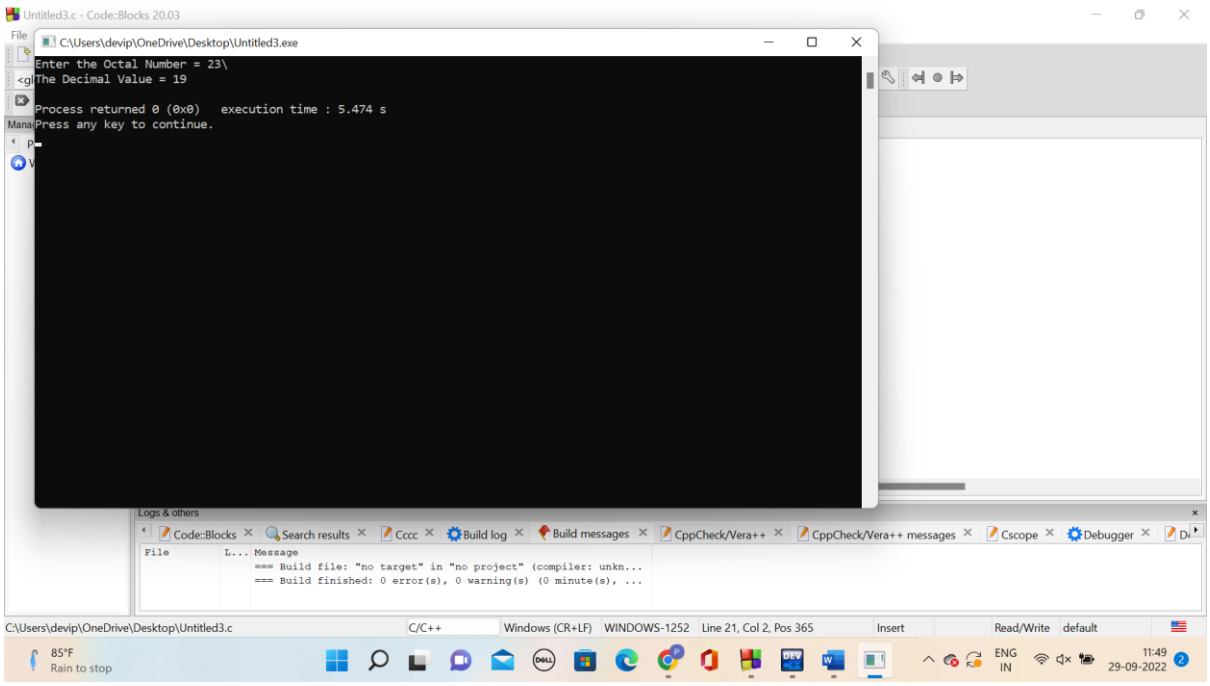


20. Conversion of octal to decimal

PROGRAM

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

int main()
{
    int octal, decimal = 0;
    int i = 0;

    printf("Enter the Octal Number = ");
    scanf("%d",&octal);

    while(octal != 0)
```

```
    {
        decimal = decimal + (octal % 10) * pow(8, i++);
        octal = octal / 10;
    }

    printf("The Decimal Value = %d\n", decimal);

    return 0;
}
```

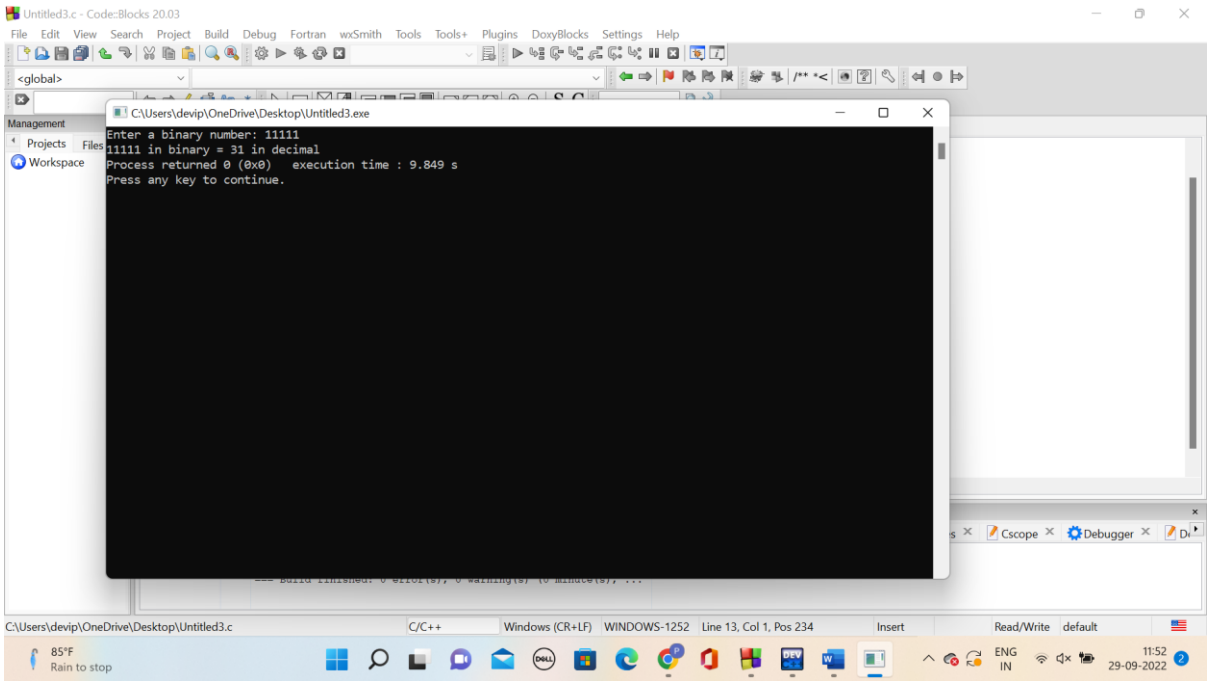


21. Conversion of binary to decimal

PROGRAM

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

int convert(long long);

int main() {
  long long n;
```

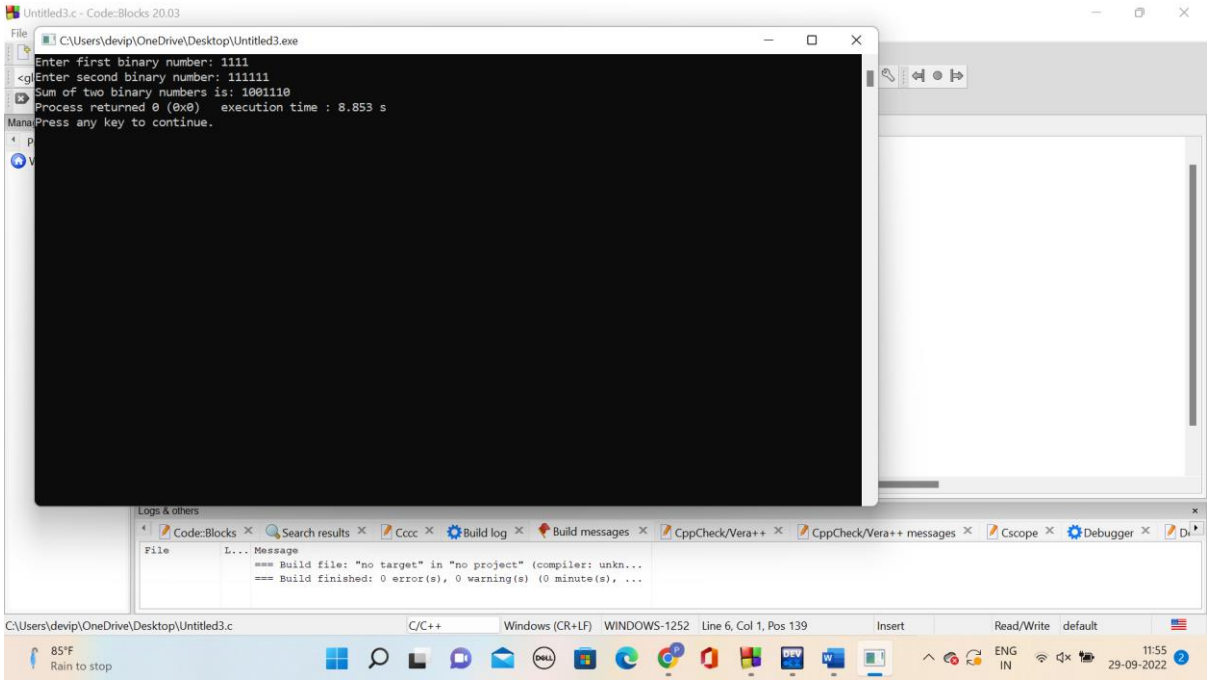
```
  printf("Enter a binary number: ");
  scanf("%lld", &n);
  printf("%lld in binary = %d in decimal", n, convert(n));
  return 0;
}

// function definition
int convert(long long n) {
  int dec = 0, i = 0, rem;

  while (n!=0) {
    rem = n % 10;
    n /= 10;
    dec += rem * pow(2, i);
    ++i;
  }

  return dec;
}
```



22. write a c program for binary addition

PROGRAM

```
#include <stdio.h>
int main(){
    long int binary1, binary2;
    int i = 0, rem = 0, sum[20];

    printf("Enter first binary number: ");
    scanf("%ld", &binary1);
    printf("Enter second binary number: ");
    scanf("%ld", &binary2);

    while (binary1 != 0 || binary2 != 0){
        sum[i++] = (binary1 %10 + binary2 % 10 + rem) % 2;
        rem = (binary1 %10 + binary2 % 10 + rem) / 2;
        binary1 = binary1 / 10;
        binary2 = binary2 / 10;
    }
    if (rem != 0)
        sum[i++] = rem;
    --i;
    printf("Sum of two binary numbers is: ");
    while (i >= 0){
        printf("%d", sum[i--]);
    }
    return 0;
}
```

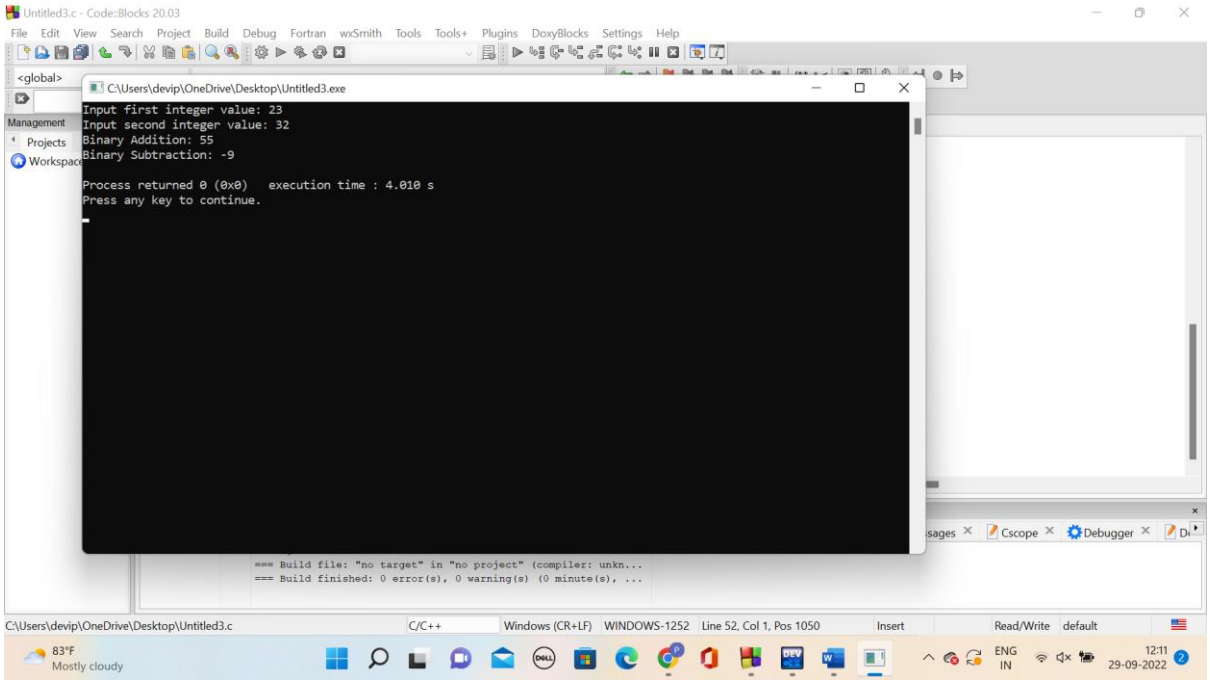


23. write a c program for binary subtraction

PROGRAM

```
#include <stdio.h>

int binAddition(int a, int b)
{
   int c; //carry
   while (b != 0) {

      c = (a & b) << 1;
      a = a ^ b;
      b = c;
   }
   return a;
}



int binSubtracton(int a, int b)
{
```

```
    int carry;

    b = binAddition(~b, 1);

    while (b != 0) {
        carry = (a & b) << 1;
        a = a ^ b;
        b = carry;
    }
    return a;
}

int main()
{
    int number1, number2, binAdd, binSub;

    printf("Input first integer value: ");
    scanf("%d", &number1);

    printf("Input second integer value: ");
    scanf("%d", &number2);

    binAdd = binAddition(number1, number2);
    binSub = binSubtracton(number1, number2);

    printf("Binary Addition: %d\n", binAdd);
    printf("Binary Subtraction: %d\n", binSub);

    return 0;
}
```



24. write a c program for binary multiplication.

PROGRAM

```
#include <stdio.h>

int binaryproduct(int, int);

int main()
{

    long binary1, binary2, multiply = 0;
    int digit, factor = 1;

    printf("Enter the first binary number: ");
    scanf("%ld", &binary1);
    printf("Enter the second binary number: ");
    scanf("%ld", &binary2);
    while (binary2 != 0)
    {
```

```
        digit =  binary2 % 10;
        if (digit == 1)
        {
            binary1 = binary1 * factor;
            multiply = binaryproduct(binary1, multiply);
        }
        else
            binary1 = binary1 * factor;
        binary2 = binary2 / 10;
        factor = 10;
    }
    printf("Product of two binary numbers: %ld", multiply);
    return 0;
}

int binaryproduct(int binary1, int binary2)
{
    int i = 0, remainder = 0, sum[20];
    int binaryprod = 0;

    while (binary1 != 0 || binary2 != 0)
    {
        sum[i++] =(binary1 % 10 + binary2 % 10 + remainder) % 2;
        remainder =(binary1 % 10 + binary2 % 10 + remainder) / 2;
        binary1 = binary1 / 10;
        binary2 = binary2 / 10;
    }
    if (remainder != 0)
        sum[i++] = remainder;
    --i;
    while (i >= 0)
        binaryprod = binaryprod * 10 + sum[i--];
```

```
    return binaryprod;
}
```