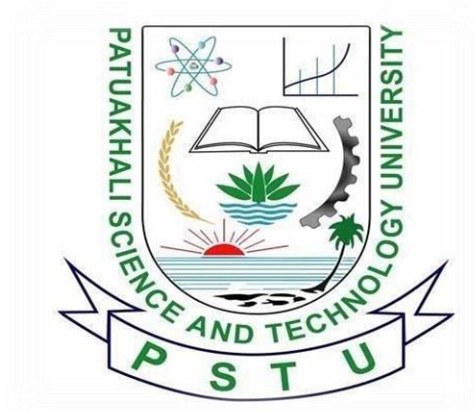


PATUAKHALI SCIENCE AND TECHNOLOGY UNIVERSITY



COURSE CODE 112

SUBMITTED TO:

Prof. MD Mahbubur Rahman Sir
Department of Computer Science And Communication
Engineering

Faculty of Computer Science And Engineering

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Date of submission: 31-3-2023

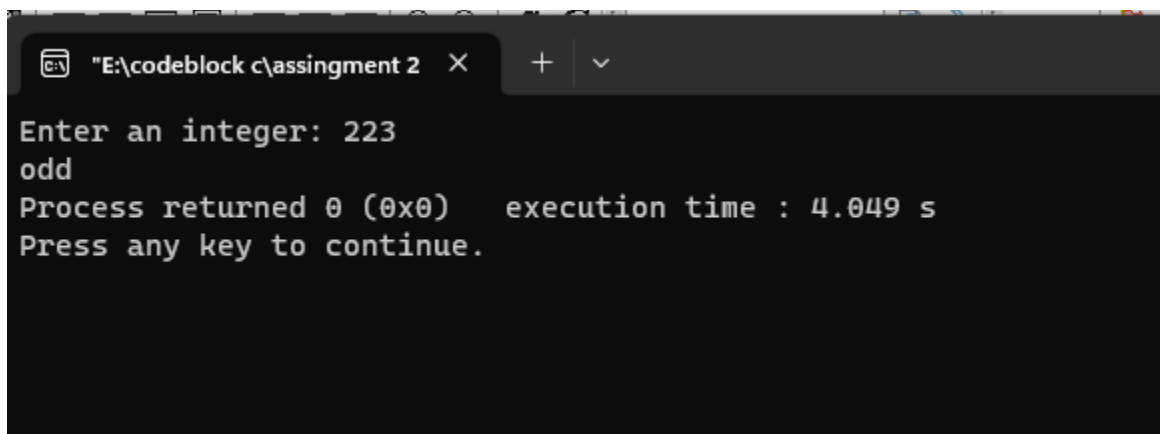
Programming Exercise

6.1 Even or Odd

```
#include<stdio.h>

int main()
{ int num;

  printf("Enter an integer: ");
  scanf("%d",&num);
  if(num%2==0)
    printf("Even");
  else if(num!=0)
    printf("odd");
  else
    printf("the number is 0");
  return 0;
}
```



```
"E:\codeblock c\assingment 2" X + v
Enter an integer: 223
odd
Process returned 0 (0x0)   execution time : 4.049 s
Press any key to continue.
```

6.2 sum of all integers greater than 100 and less than 200 that are divisible by 7.

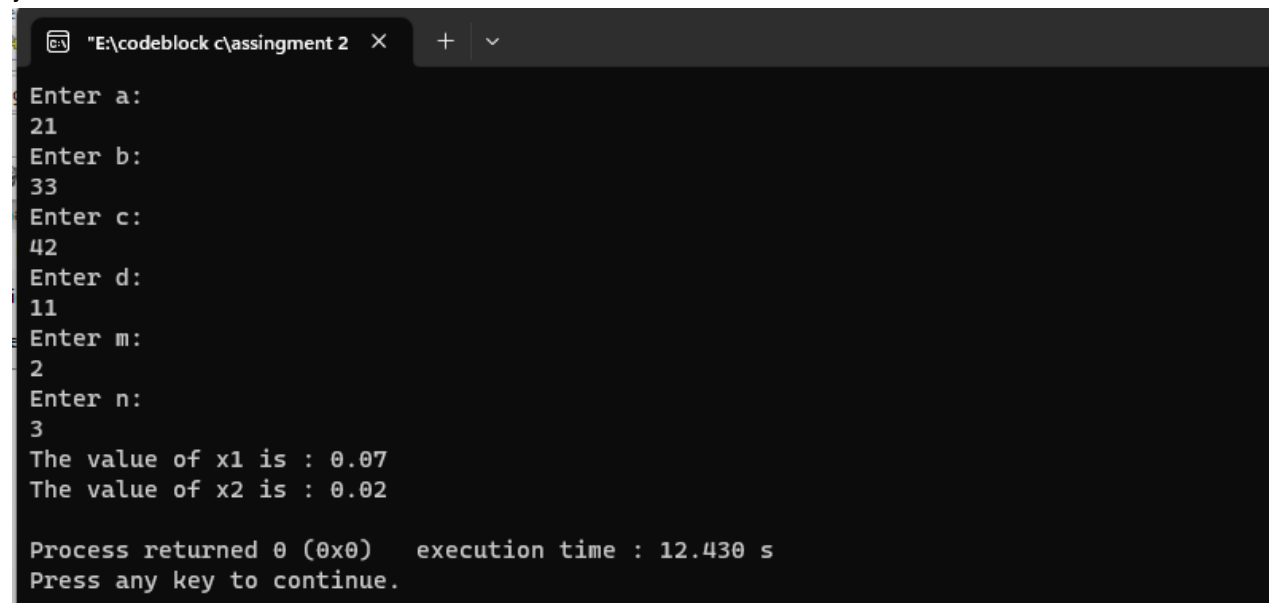
```
#include<stdio.h>
int main()
{
    int sum=0,n=200,i;
    for(i=101;i<n;i++)
    {
        if(i%7==0)
        {
            sum=sum+i;
        }
    }

    printf("The sum is: %d",sum);
}
```

```
"E:\codeblock c\assingment 2" × + ▾
The sum is: 2107
Process returned 0 (0x0)   execution time : 0.016 s
Press any key to continue.
```

6.3 two linear equations with two unknowns x1 and x2

```
#include<stdio.h>
int main()
{
    float a,b,c,d,m,n,x1,x2;
    printf("Enter a: \n");
    scanf("%f",&a);
    printf("Enter b: \n");
    scanf("%f",&b);
    printf("Enter c: \n");
    scanf("%f",&c);
    printf("Enter d: \n");
    scanf("%f",&d);
    printf("Enter m: \n");
    scanf("%f",&m);
    printf("Enter n: \n");
    scanf("%f",&n);
    x1=((m*d-b*n)/(a*d-c*b));
    x2=((n*a-m*c)/(a*d-c*b));
    printf("The value of x1 is : %0.2f\n",x1);
    printf("The value of x2 is : %0.2f\n",x2);
}
```



```
"E:\codeblock c\assingment 2" X + v
Enter a:
21
Enter b:
33
Enter c:
42
Enter d:
11
Enter m:
2
Enter n:
3
The value of x1 is : 0.07
The value of x2 is : 0.02

Process returned 0 (0x0)   execution time : 12.430 s
Press any key to continue.
```

6.4 Admission to a professional course is subject

```
#include<stdio.h>

int main()
{
    int m,p,c,s,mp;

    printf("Requirement:\n");

    printf("Mark in mathematics: 60\nMark in Physics: 50\nMark in Chemistry: 40\nTotal number
in all three subject: 200+\nOr Total marks in Math and Physics:150 \n");

    printf("Enter your Mathematics number: ");

    scanf("%d",&m);

    printf("Enter your Physics number: ");

    scanf("%d",&p);

    printf("Enter your Chemistry number: ");

    scanf("%d",&c);

    s=p+c+m;

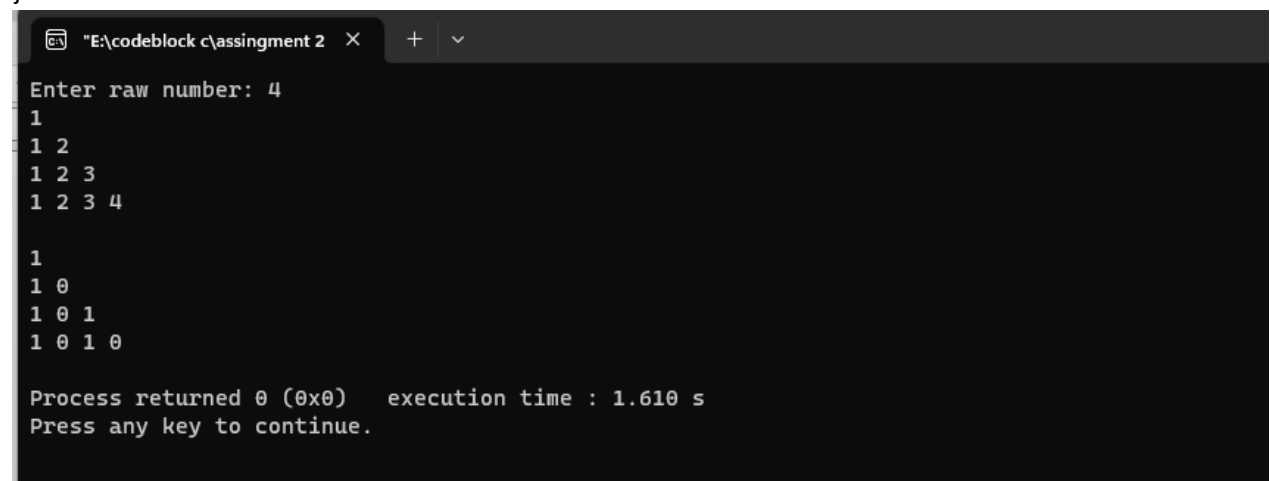
    mp=m+p;

    if(m>=60 && p>=50 && c>=40)
    {
        if(s>=200 || mp>=150)
        {
            printf("You are eligible candidate");
        }
    }
    else
        printf("Not eligible");
}
```

```
"E:\codeblock c\assingment 2" X + v
Requirement:
Mark in mathematics: 60
Mark in Physics: 50
Mark in Chemistry: 40
Total number in all three subject: 200+
Or Total marks in Math and Physics:150
Enter your Mathematics number: 45
Enter your Physics number: 23
Enter your Chemistry number: 44
Not eligible
Process returned 0 (0x0)   execution time : 9.929 s
Press any key to continue.
```

6.7 Pattern

```
#include<stdio.h>
int main()
{
    int n,r,c;
    printf("Enter raw number: ");
    scanf("%d",&n);
    for(r=1;r<=n;r++)
    {
        for(c=1;c<=r;c++)
        {
            printf("%d ",c);
        }
        printf("\n");
    }
    printf("\n");
    for(r=1;r<=n;r++)
    {
        for(c=1;c<=r;c++)
        {
            printf("%d ",c%2);
        }
        printf("\n");
    }
}
```



```
"E:\codeblock c\assingment 2" X + v
Enter raw number: 4
1
1 2
1 2 3
1 2 3 4

1
1 0
1 0 1
1 0 1 0

Process returned 0 (0x0)   execution time : 1.610 s
Press any key to continue.
```

6.8 seasonal discounts on purchase of items

```
#include<stdio.h>

int main()
{
    float ch,p;
    int n;

    printf("Discount on a purchase of items\n");

    printf("1. Purchase amount: 0 - 100\n2. Purchase amount: 101 - 200\n3. Purchase amount: 201 -300\n4. Purchase amount: 300 or above\n");

    printf("Enter Your Purchase ammount: \n");

    scanf("%f",&ch);

    if(ch>=0 && ch<=100)
    {
        p=ch-ch*0.05;
    }

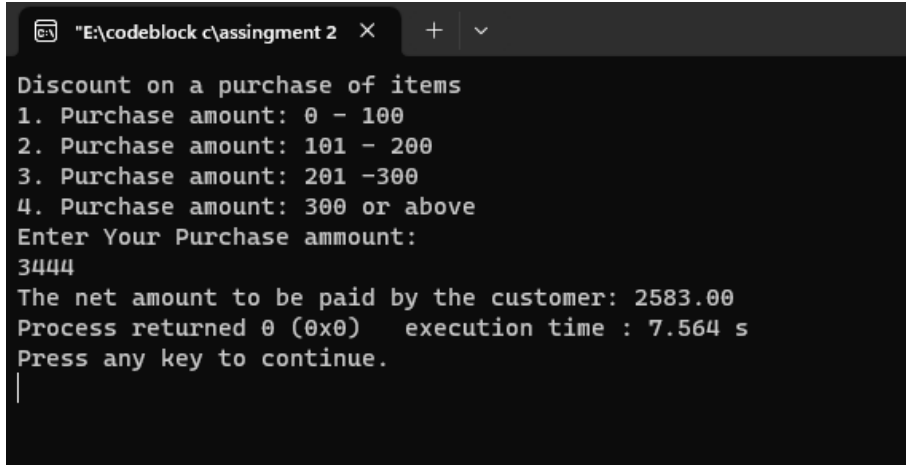
    else if(ch>=101 && ch<=200)
    {
        p=ch-ch*0.125;
    }

    else if(ch>=201 && ch<=300)
    {
        p=(ch-(ch*0.175));
    }

    else if(ch>=301)
    {
        p=(ch-(ch*0.25));
    }
}
```



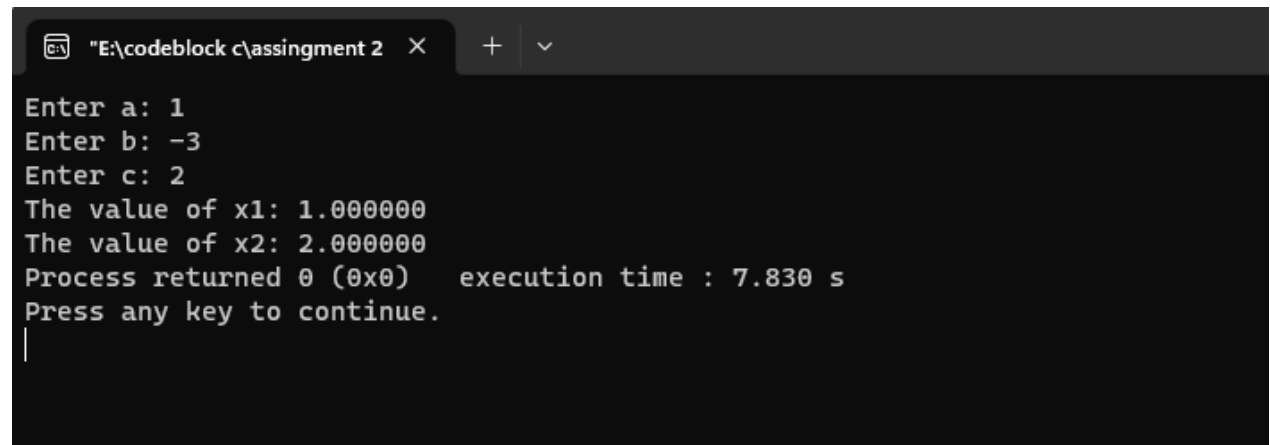
```
}  
  
printf("The net amount to be paid by the customer: %0.2f",p);  
}
```



```
"E:\codeblock c\assingment 2" X + v  
Discount on a purchase of items  
1. Purchase amount: 0 - 100  
2. Purchase amount: 101 - 200  
3. Purchase amount: 201 -300  
4. Purchase amount: 300 or above  
Enter Your Purchase ammount:  
3444  
The net amount to be paid by the customer: 2583.00  
Process returned 0 (0x0)   execution time : 7.564 s  
Press any key to continue.  
|
```

6.10 compute the real roots of a quadratic equation

```
#include<stdio.h>
int main()
{
    float a,b,c,n1,n2,D;
    printf("Enter a: ");
    scanf("%f",&a);
    printf("Enter b: ");
    scanf("%f",&b);
    printf("Enter c: ");
    scanf("%f",&c);
    D= sqrt(b*b-4*a*c);
    x1=(-b-D)/(2*a);
    x2=(-b+D)/(2*a);
    printf("The value of x1: %f",x1);
    printf("The value of x2: %f",x2);
}
```

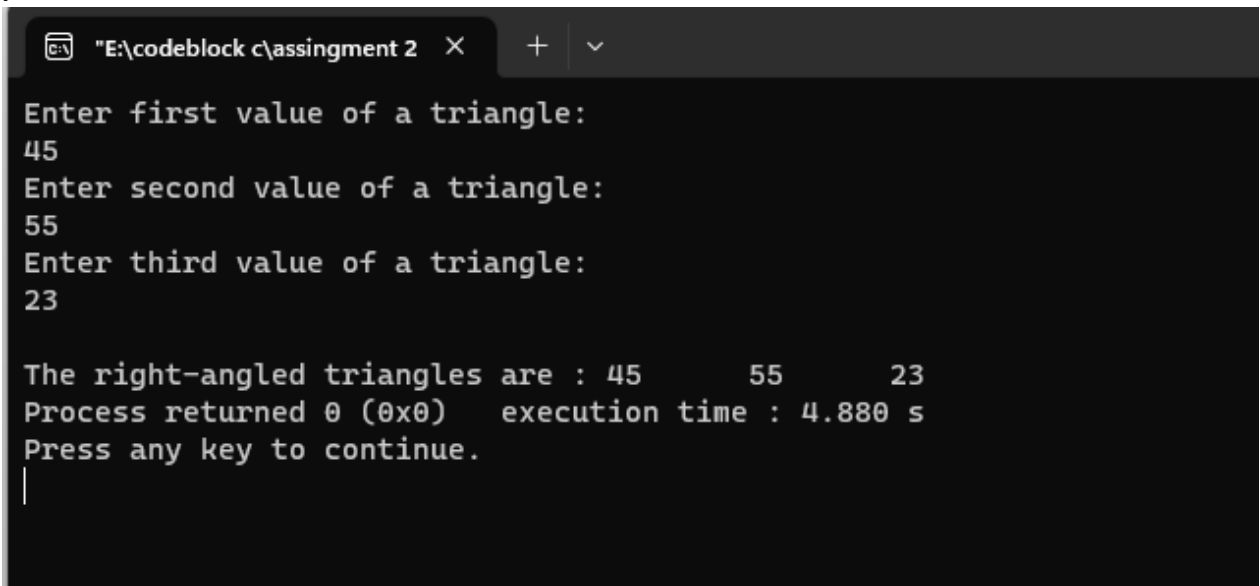


The screenshot shows a code editor window with the title bar "E:\codeblock c\assingment 2". The editor contains the C code from the previous block. Below the code, the output of the program is displayed in a terminal-like window. The output shows the user entering values for a, b, and c, followed by the calculated roots x1 and x2. The execution time is also shown as 7.830 s.

```
Enter a: 1
Enter b: -3
Enter c: 2
The value of x1: 1.000000
The value of x2: 2.000000
Process returned 0 (0x0)   execution time : 7.830 s
Press any key to continue.
|
```

6.11 displays the output stating that they are the sides of right-angled triangle

```
#include<stdio.h>
int main()
{
    int n1,n2,n3;
    printf("Enter first value of a triangle:\n");
    scanf("%d",&n1);
    printf("Enter second value of a triangle:\n");
    scanf("%d",&n2);
    printf("Enter third value of a triangle:\n");
    scanf("%d",&n3);
    printf("\nThe right-angled triangles are : %d\t %d\t %d\t",n1,n2,n3);
}
```



The screenshot shows a code editor window with the title "E:\codeblock c\assingment 2". The code is the same as in the previous block. The output of the program is displayed in the console area, showing the prompts and the user input (45, 55, 23). The final output line is "The right-angled triangles are : 45 55 23". Below this, the console shows "Process returned 0 (0x0) execution time : 4.880 s" and "Press any key to continue." with a cursor on a new line.

6.12 An electricity board charges

```
#include<stdio.h>
int main()
{
    float unit,sum=100;
    printf("Enter Electricity in unit : ");
    scanf("%f",&unit);
    if(unit<=200)

        sum=sum+unit*0.8;

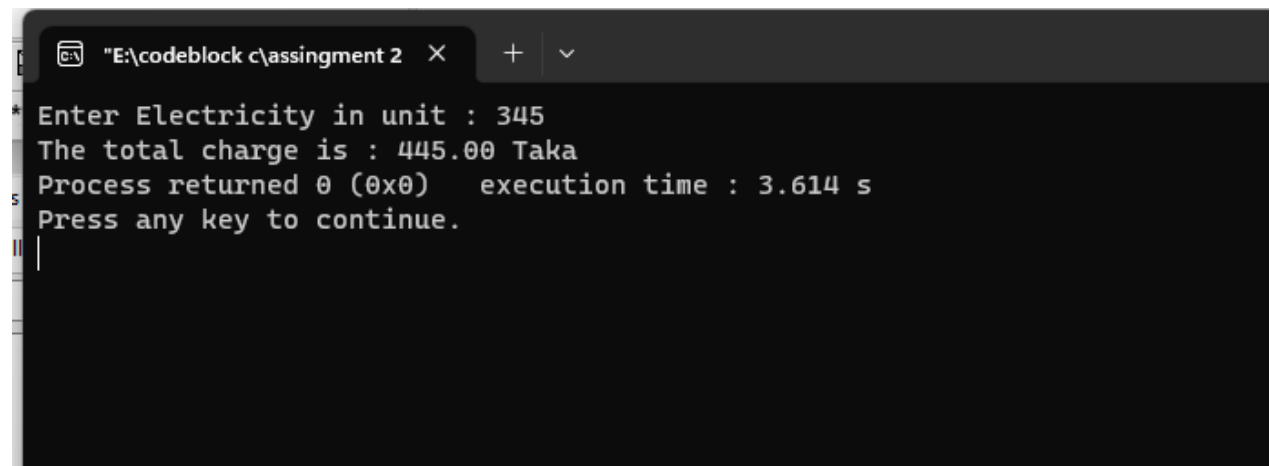
    else if(unit>200&&unit<=300)

        sum=sum+unit*0.9;

    else if(unit>300)

        sum=sum+unit*1;

    printf("The total charge is : %0.2f Taka",sum);
}
```

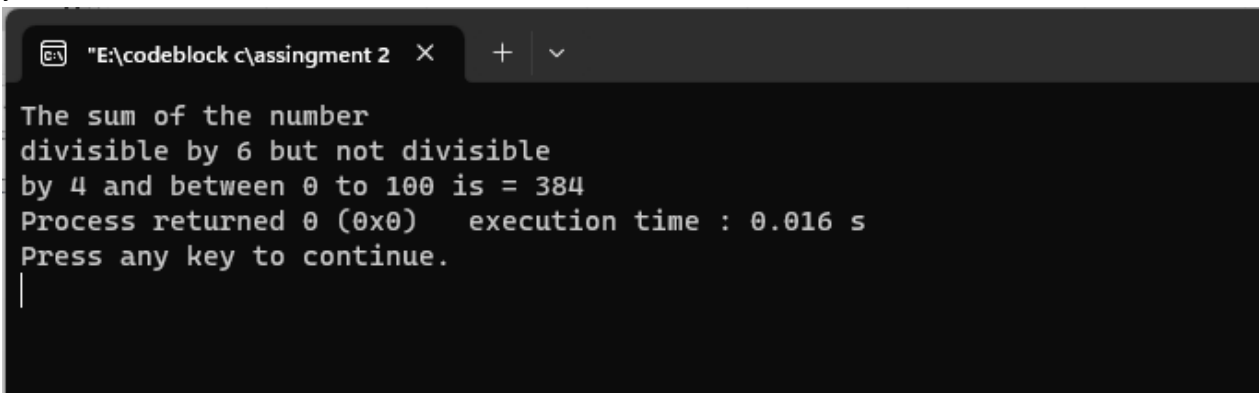


```
"E:\codeblock c\assingment 2" x + v
* Enter Electricity in unit : 345
  The total charge is : 445.00 Taka
s Process returned 0 (0x0)   execution time : 3.614 s
  Press any key to continue.
  |
```

6.13 compute and display the sum of all integers that are divisible by 6 but not divisible by 4 and lie between 0 and 100

```
#include<stdio.h>
int main()
{
    int sum=0,i,n;
    n=100;
    for(i=0;i<=n;i++)
    {
        if(i%6==0&& i%4!=0)
            sum= sum+i;

    }
    printf("The sum of the number \ndivisible by 6 but not divisible \nby 4 and between 0 to 100
is = %d",sum);
}
```



The screenshot shows a code editor window with the title bar "E:\codeblock c\assingment 2". The output of the program is displayed in the console area, showing the sum of numbers divisible by 6 but not by 4 between 0 and 100, which is 384. The output also includes the process return status (0) and execution time (0.016 s).

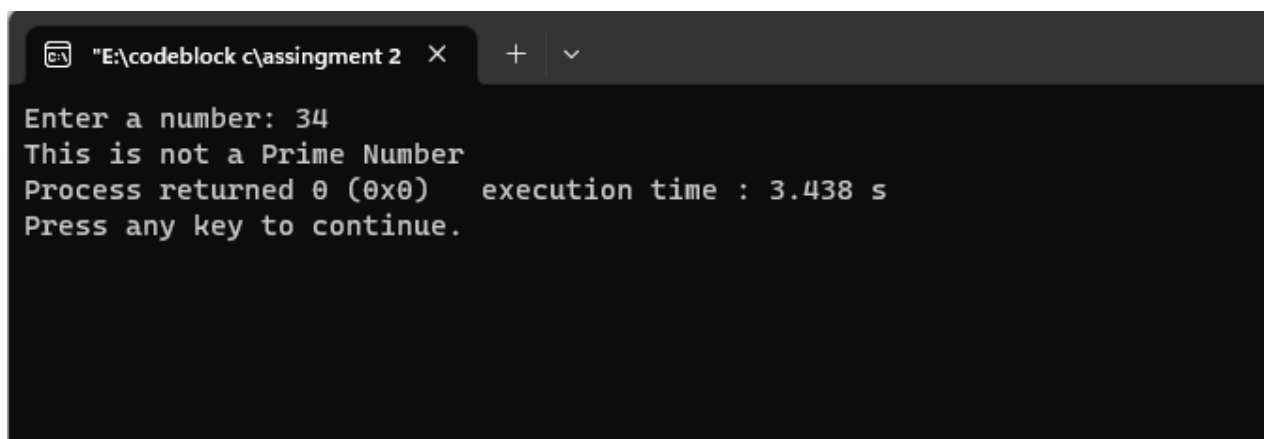
```
"E:\codeblock c\assingment 2" X + v
The sum of the number
divisible by 6 but not divisible
by 4 and between 0 to 100 is = 384
Process returned 0 (0x0)   execution time : 0.016 s
Press any key to continue.
|
```

6.14 the number is a prime number and display the output accordingly.

```
#include<stdio.h>
int main()
{
    int n,i,count=0;
    printf("Enter a number: ");
    scanf("%d",&n);

    for(i=2;i<n;i++)
    {
        if(n%i==0){
            count++;
            break;}
    }
    if(count==0)
    {
        printf("This is a Prime Number");
    }
    else
    {
        printf("This is not a Prime Number");
    }

    return 0;
}
```



```
E:\codeblock c\assingment 2
Enter a number: 34
This is not a Prime Number
Process returned 0 (0x0)   execution time : 3.438 s
Press any key to continue.
```

6.15 double-type value x that represents angle in radians

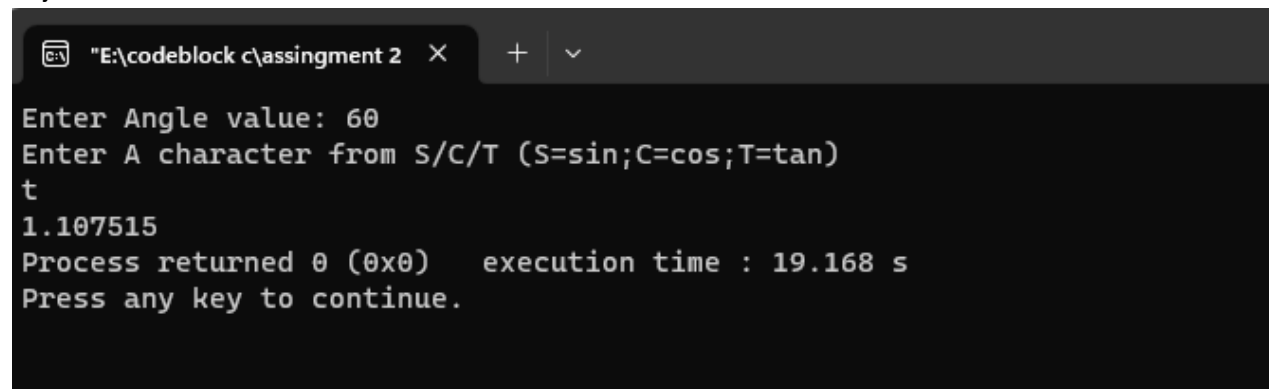
```
#include<stdio.h>
#include<math.h>
int main()
{
    double n,x,r;
    char T;
    printf("Enter Angle value: ");
    scanf("%lf",&x);
    r=x*(180/3.1416);
    printf("Enter A character from S/C/T \n");
    scanf("%s",&T);

    switch(T){
    case 's':
    case 'S':

        n=sin(r);
    case 'c':
    case 'C':

        n=cos(r);
    case 't':
    case 'T':

        n=tan(r);
    }
    printf("%lf",n);
}
```



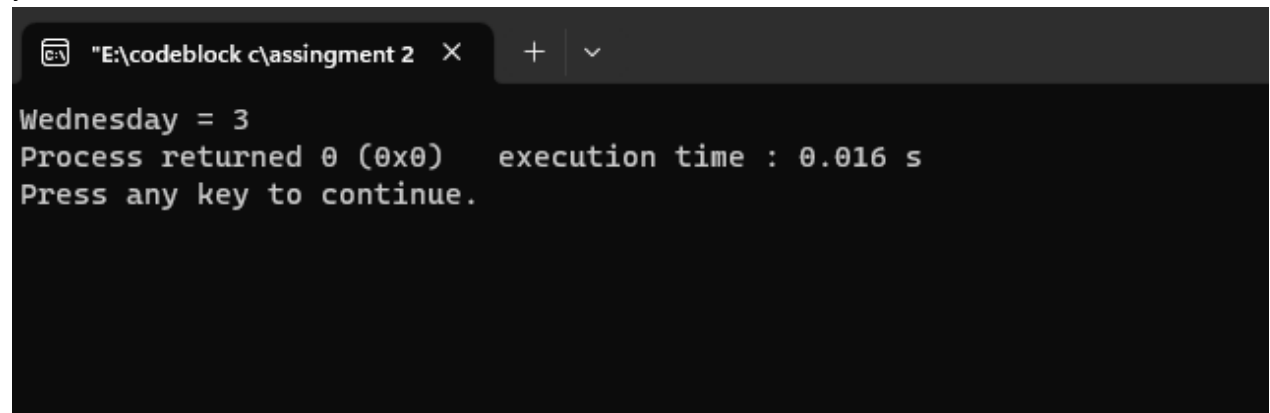
```
"E:\codeblock c\assingment 2" × + v
Enter Angle value: 60
Enter A character from S/C/T (S=sin;C=cos;T=tan)
t
1.107515
Process returned 0 (0x0)   execution time : 19.168 s
Press any key to continue.
```

6.16 Enumaration

```
#include<stdio.h>
enum days_in_week{
monday=1,tuesday,wednesday,thursday,friday,saturday,sunday

};
int main()
{
    enum days_in_week day1
    day1=wednesday;
    printf("Wednesday = %d");

}
```

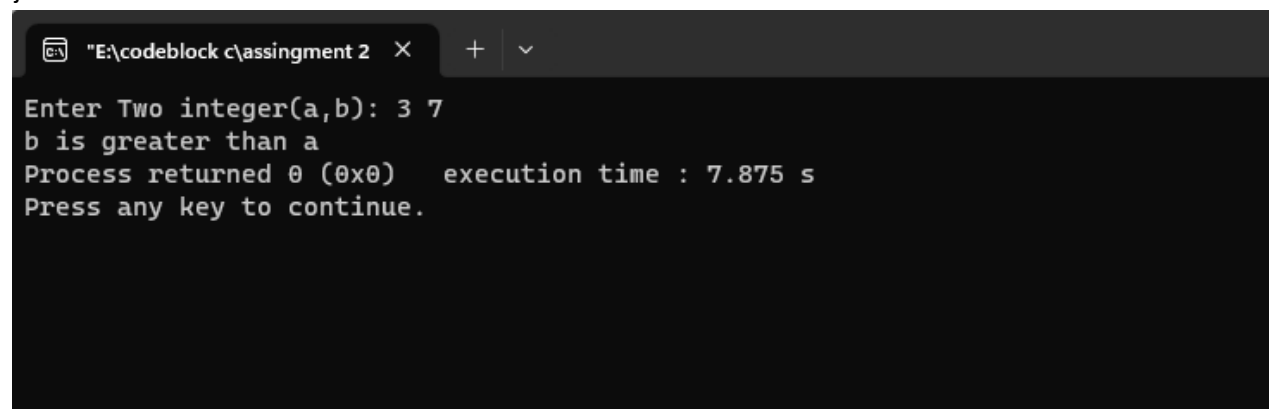


```
"E:\codeblock c\assingment 2" X + v
Wednesday = 3
Process returned 0 (0x0)   execution time : 0.016 s
Press any key to continue.
```


6.17 Greater or smaller or equal

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

    int a,b;
    printf("Enter Two integer(a,b): ");
    scanf("%d %d",&a,&b);
    if(a>b)
        printf("a is greater than b");
    else if(a<b)
        printf("b is greater than a");
    else
        printf("a and b are equal");
}
```

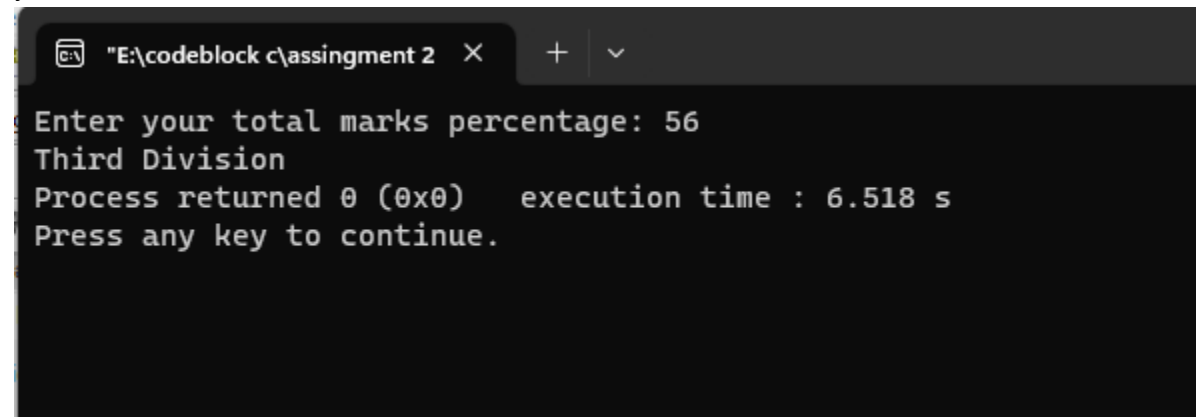


The screenshot shows a code editor window with a single tab titled "E:\codeblock c\assingment 2". The code from the previous block is visible in the editor. Below the code, the output of the program is displayed in a dark-themed console window. The output shows the prompt "Enter Two integer(a,b):" followed by the user input "3 7". The program then prints "b is greater than a". Below this, it shows "Process returned 0 (0x0)" and "execution time : 7.875 s". The final line of the output is "Press any key to continue.", which is followed by a blank line.

```
"E:\codeblock c\assingment 2" × + ▾
Enter Two integer(a,b): 3 7
b is greater than a
Process returned 0 (0x0)   execution time : 7.875 s
Press any key to continue.
```

6.18 Mark distribution with Grading system

```
#include<stdio.h>
int main()
{
    int n;
    printf("Enter your total marks percentage: ");
    scanf("%d",&n);
    if(n>=80)
        printf("First Division");
    else if(n>=60 && n<80)
        printf("Second Division");
    else if(n<60)
        printf("Third Division");
}
```



```
"E:\codeblock c\assingment 2" X + v
Enter your total marks percentage: 56
Third Division
Process returned 0 (0x0)   execution time : 6.518 s
Press any key to continue.
```

6.19 display the corresponding number of days in that month

```
#include<stdio.h>

int main()
{

    int n;

    printf("The 12 months
are\n1.January\n2.February\n3.March\n4.April\n5.May\n6.June\n7.July\n8.August\n9.Septem
ber\n10.October\n11.November\n12.December");

    printf("\nChoose month number: ");

    scanf("%d",&n);

    switch(n)
    {
case 1:
        printf("January = 31 days");
case 2:
        printf("February = 28 days");
case 3:
        printf("March = 31 days");
case 4:
        printf("April = 30 days");
case 5:
        printf("May = 31 days");
case 6:
        printf("June = 30 days");
case 7:
        printf("July = 31 days");
```

case 8:

```
printf("August = 31 days");
```

case 9:

```
printf("September = 30 days");
```

case 10:

```
printf("October = 31 days");
```

case 11:

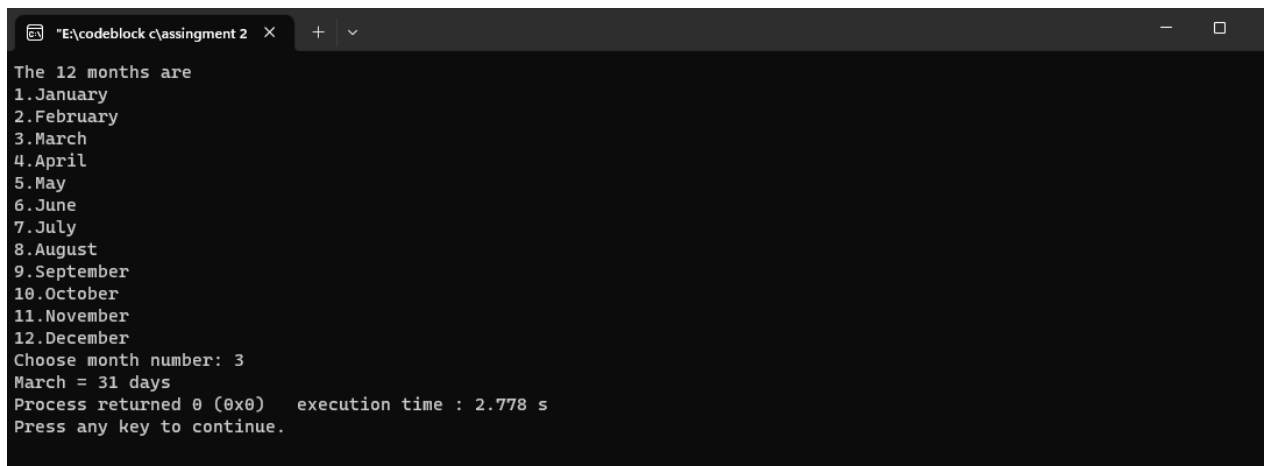
```
printf("November = 30 days");
```

case 12:

```
printf("December = 31 days");
```

```
}
```

```
}
```



```
"E:\codeblock c\assingment 2" x + v
The 12 months are
1.January
2.February
3.March
4.April
5.May
6.June
7.July
8.August
9.September
10.October
11.November
12.December
Choose month number: 3
March = 31 days
Process returned 0 (0x0)   execution time : 2.778 s
Press any key to continue.
```

C Program to Check Whether a Character is a Vowel or Consonant

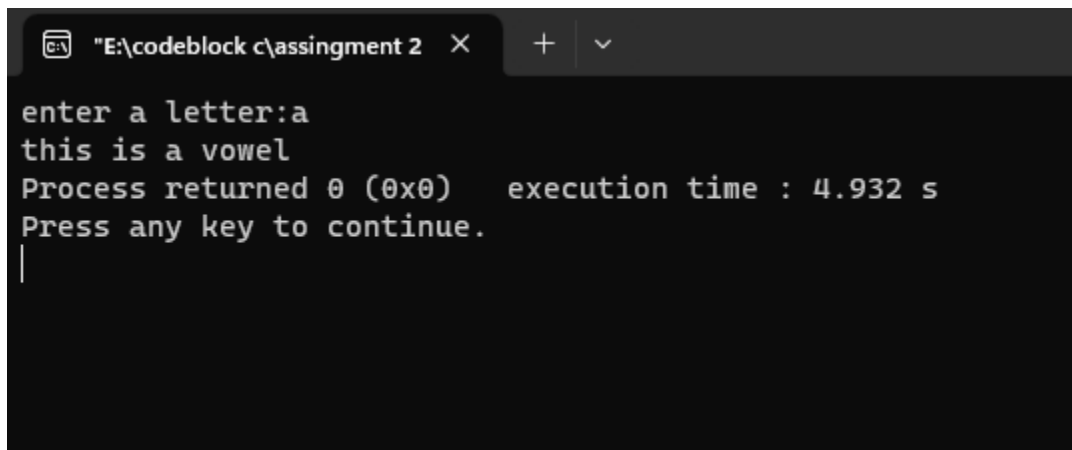
```
#include<stdio.h>

int main()
{
    char ch;

    printf("enter a letter:");
    scanf("%c",&ch);

    if(ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u')
        printf("this is a vowel");
    else
        printf("this is a consonant");

    return 0;
}
```



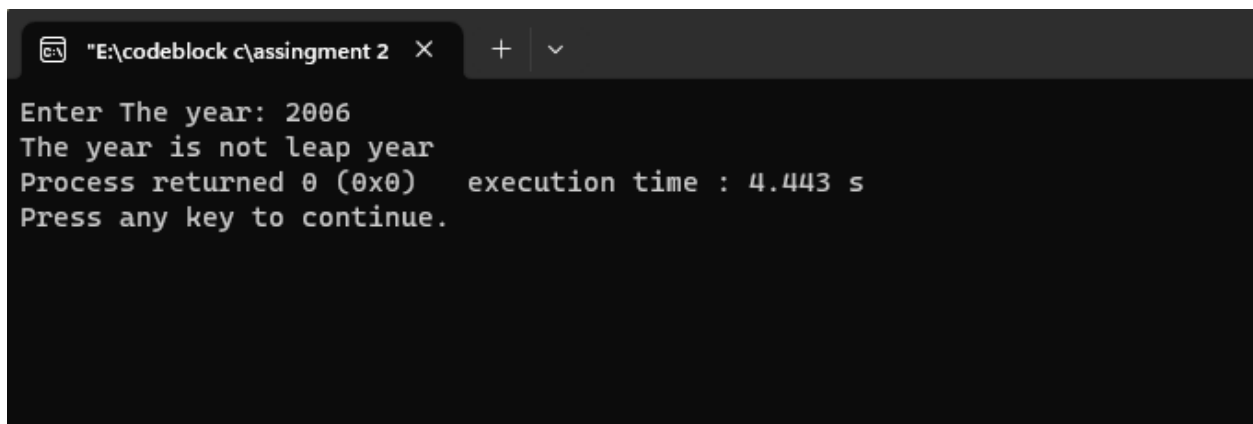
```
"E:\codeblock c\assingment 2" X + v
enter a letter:a
this is a vowel
Process returned 0 (0x0)   execution time : 4.932 s
Press any key to continue.
|
```

C Program to Check Leap Year

```
#include<stdio.h>

int main()
{
    int n;

    //n=year
    printf("Enter The year: ");
    scanf("%d",&n);
    if(n%4==0)
    {
        if(n%100==0)
        {
            if(n%400==0)
            {
                printf("The year is a leap year");
            }
        }
    }
    else
        printf("The year is not leap year");
}
```



The screenshot shows a Code::Blocks IDE window with the title "E:\codeblock c\assingment 2". The console output is as follows:

```
Enter The year: 2006
The year is not leap year
Process returned 0 (0x0)   execution time : 4.443 s
Press any key to continue.
```

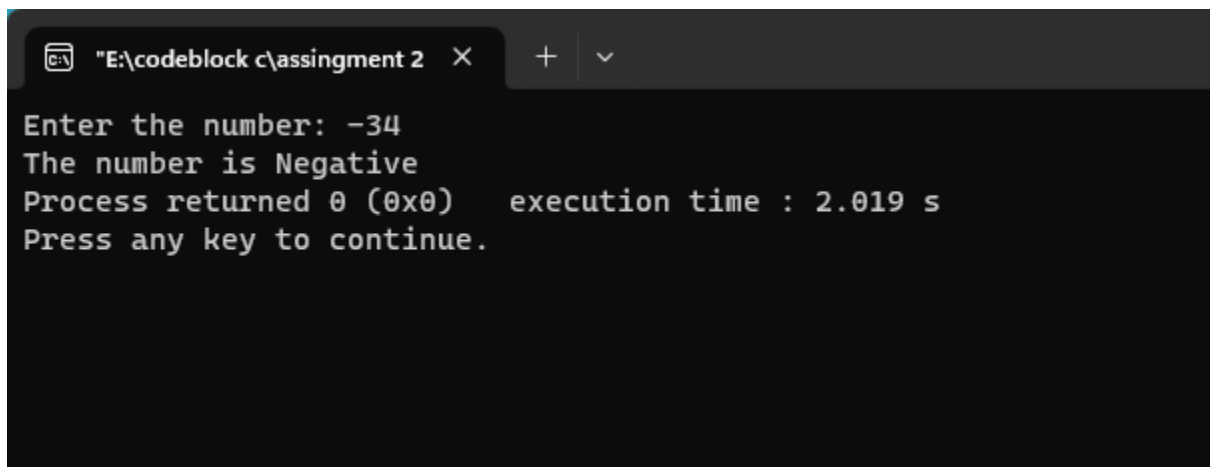
C Program to Check Whether a Number is Positive or Negative

```
#include<stdio.h>

int main()
{
    int n;

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

    if(n>0)
    {
        printf("The number is positive ");
    }
    else if(n<0)
    {
        printf("The number is Negative ");
    }
    else
    {
        printf("The number is Zero");
    }
}
```



```
"E:\codeblock c\assingment 2" X + v
Enter the number: -34
The number is Negative
Process returned 0 (0x0)   execution time : 2.019 s
Press any key to continue.
```

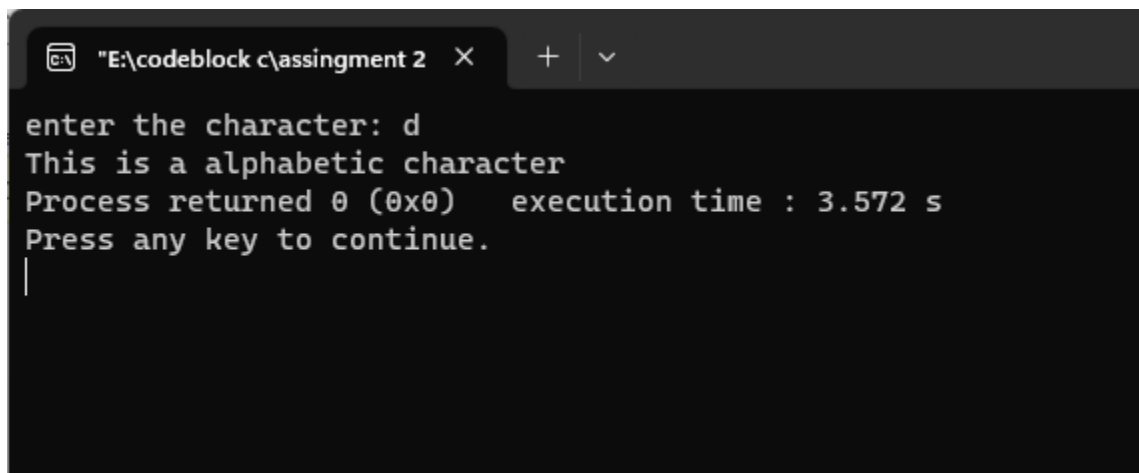
C Program to Check Whether a Character is an Alphabet or not

```
#include<stdio.h>

int main()
{
    char n;

    printf("enter the character: ");
    scanf("%c",&n);

    if(n>=65 && 90>=n)
        printf("This is a alphabetic character");
    else if(n>=97 && 122>=n)
        printf("This is a alphabetic character");
    else
        printf("This is not a alphabetic character");
}
```

A screenshot of a terminal window with a dark background. The window title bar shows a file icon, the path "E:\codeblock c\assingment 2", and standard window controls (close, maximize, minimize). The terminal output shows the program's execution: it prompts "enter the character: ", the user enters 'd', and the program outputs "This is a alphabetic character". Below this, it shows "Process returned 0 (0x0) execution time : 3.572 s" and "Press any key to continue." with a cursor on the next line.

```
"E:\codeblock c\assingment 2" X + v
enter the character: d
This is a alphabetic character
Process returned 0 (0x0) execution time : 3.572 s
Press any key to continue.
|
```

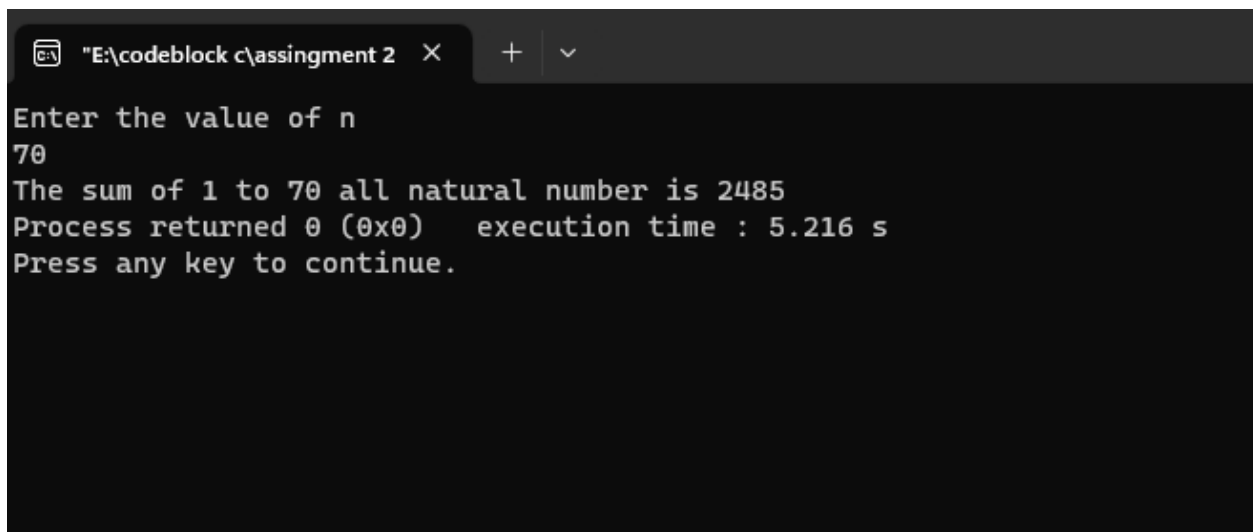

C Program to Calculate the Sum of Natural Numbers

```
#include<stdio.h>

int main()
{

    int n,i,sum=0;
    printf("Enter the value of n\n");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        sum=sum+i;
    }

    printf("The sum of 1 to %d all natural number is %d",n,sum);
}
```



The screenshot shows a code editor window with the title bar "E:\codeblock c\assingment 2". The editor displays the output of the C program. The user is prompted to "Enter the value of n" and enters "70". The program then outputs "The sum of 1 to 70 all natural number is 2485". Below this, it shows "Process returned 0 (0x0) execution time : 5.216 s" and "Press any key to continue.".

```
E:\codeblock c\assingment 2  X  +  v
Enter the value of n
70
The sum of 1 to 70 all natural number is 2485
Process returned 0 (0x0) execution time : 5.216 s
Press any key to continue.
```

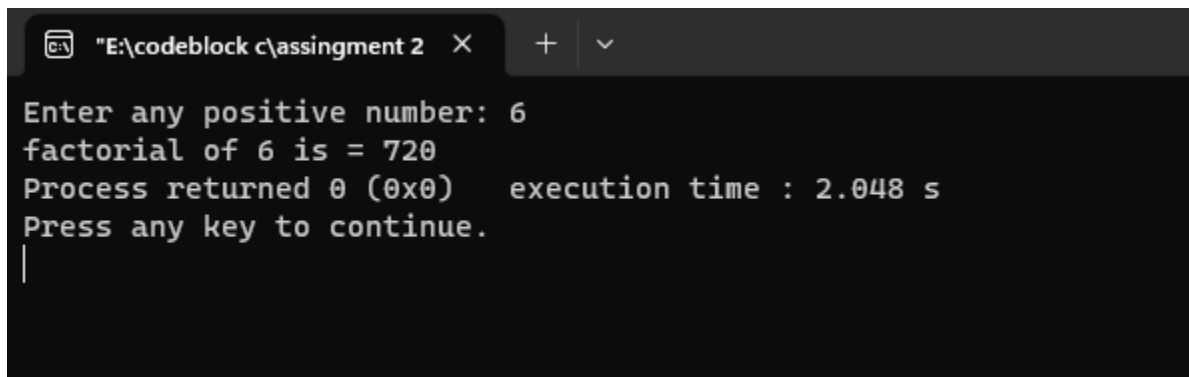
C Program to Factorial of a Number

```
#include<stdio.h>

int main()
{
    int n,i,fact=1;

    printf("Enter any positive number: ");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        fact=fact*i;
    }

    printf("factorial of %d is = %d",n,fact);
}
```



The screenshot shows a code editor window with the title bar "E:\codeblock c\assingment 2". The editor contains the C program code. Below the code, the output of the program is displayed in a terminal window. The output shows the user entering the number 6, the program calculating the factorial as 720, and displaying the result. The process returned 0 (0x0) and the execution time was 2.048 s. The prompt "Press any key to continue." is shown at the bottom of the terminal window.

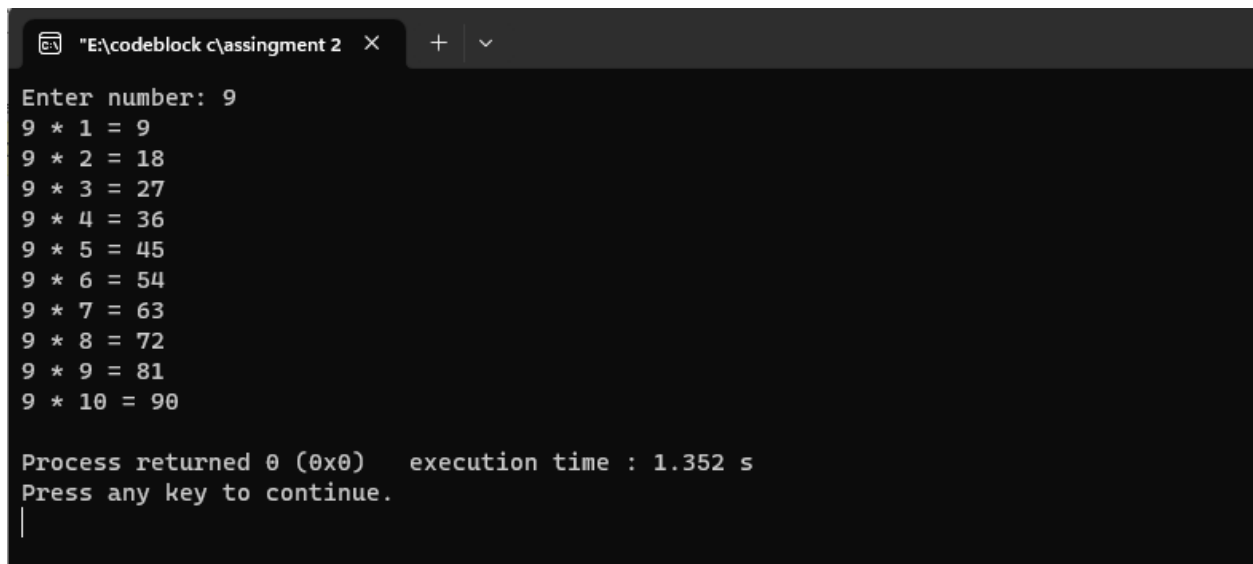
```
"E:\codeblock c\assingment 2" X + v
Enter any positive number: 6
factorial of 6 is = 720
Process returned 0 (0x0)   execution time : 2.048 s
Press any key to continue.
|
```

C Program to Generate Multiplication Table

```
#include<stdio.h>

int main()
{
    int n,i;

    printf("Enter number: ");
    scanf("%d",&n);
    for(i=1;i<=10;i++)
    {
        printf("%d * %d = %d",n,i,n*i);
        printf("\n");
    }
}
```

A screenshot of a terminal window with a dark background. The window title bar shows a file path "E:\codeblock c\assingment 2" and standard window controls. The terminal displays the output of the C program: it prompts "Enter number: 9", then lists the multiplication table for 9 from 1 to 10. At the bottom, it shows "Process returned 0 (0x0) execution time : 1.352 s" and "Press any key to continue." with a cursor on a new line.

```
"E:\codeblock c\assingment 2" × + ▾
Enter number: 9
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90

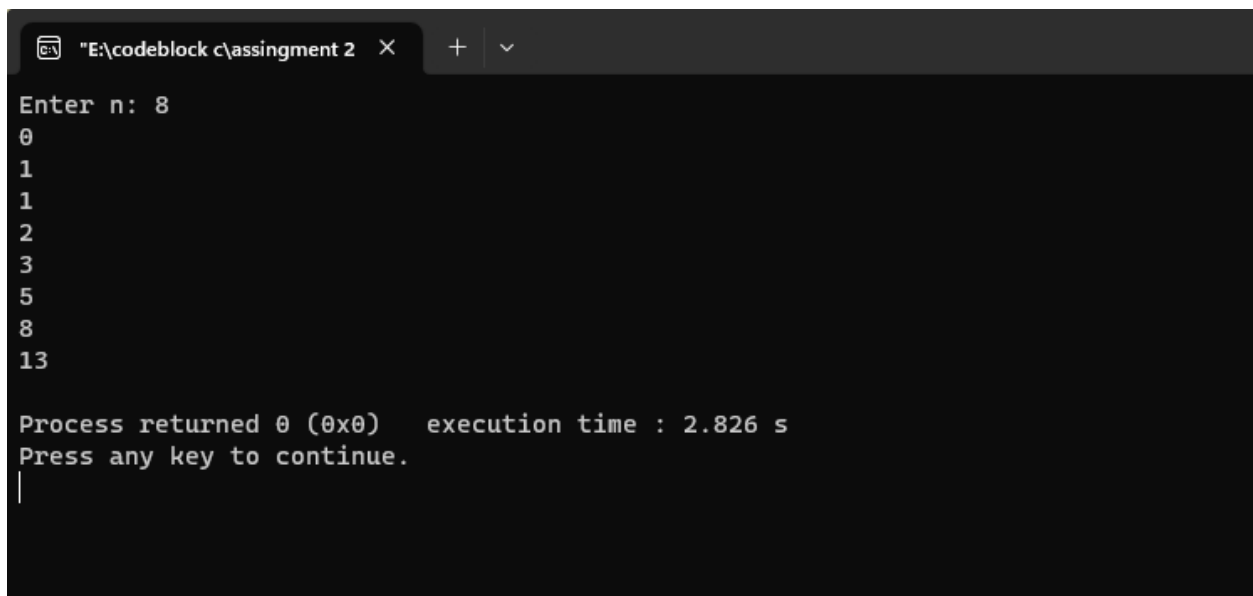
Process returned 0 (0x0)   execution time : 1.352 s
Press any key to continue.
|
```

C Program to Display Fibonacci Sequence

```
#include<stdio.h>

int main()
{ //fibonacci number
    int n,i,num1=0,num2=1,fib;

    printf("Enter n: ");
    scanf("%d",&n);
    printf("%d\n",num1);
    printf("%d\n",num2);
    for(i=0;i<=n-3;i++)
    {
        fib=num1+num2;
        num1=num2;
        num2=fib;
        printf("%d\n",fib);
    }
}
```



```
"E:\codeblock c\assingment 2" X + v
Enter n: 8
0
1
1
2
3
5
8
13

Process returned 0 (0x0)   execution time : 2.826 s
Press any key to continue.
|
```

C Program to Find GCD of two Numbers

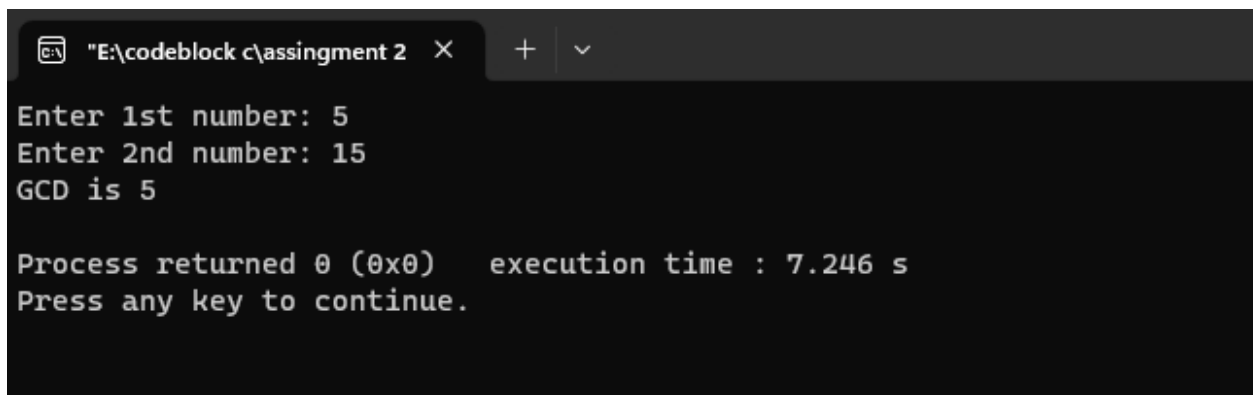
```
#include<stdio.h>

int main()
{
    int n1,n2,rem,lcm,gcd,num1,num2;

    printf("Enter 1st number: ");
    scanf("%d",&num1);
    printf("Enter 2nd number: ");
    scanf("%d",&num2);

    n1=num1;
    n2=num2;
    while(n2!=0)
    {
        rem=n1%n2;
        n1=n2;
        n2=rem; }

    gcd=n1;
    printf("GCD is %d\n",gcd);
}
```

A screenshot of a terminal window with a dark background. The title bar shows a file icon, the path "E:\codeblock c\assingment 2", and window control buttons. The terminal displays the output of the GCD program: "Enter 1st number: 5", "Enter 2nd number: 15", and "GCD is 5". Below this, it shows "Process returned 0 (0x0) execution time : 7.246 s" and "Press any key to continue.".

```
"E:\codeblock c\assingment 2" X + v
Enter 1st number: 5
Enter 2nd number: 15
GCD is 5

Process returned 0 (0x0) execution time : 7.246 s
Press any key to continue.
```

C Program to Find LCM of two Numbers

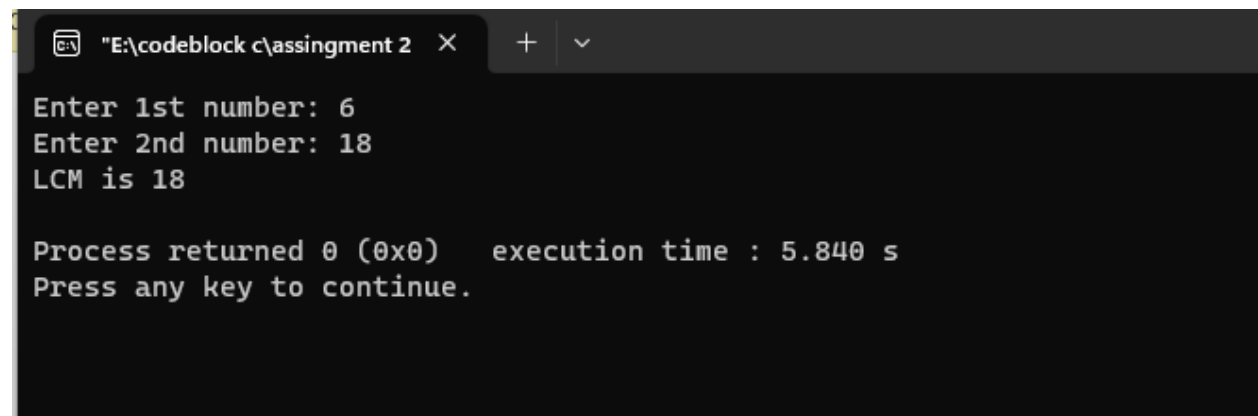
```
#include<stdio.h>

int main()
{
    int n1,n2,rem,lcm,gcd,num1,num2;

    printf("Enter 1st number: ");
    scanf("%d",&num1);
    printf("Enter 2nd number: ");
    scanf("%d",&num2);

    n1=num1;
    n2=num2;
    while(n2!=0)
    {
        rem=n1%n2;
        n1=n2;
        n2=rem; }

    gcd=n1;
    lcm=((num1*num2)/gcd);
    printf("LCM is %d\n",lcm);
}
```



The screenshot shows a terminal window with the title bar "E:\codeblock c\assingment 2". The output of the program is as follows:

```
Enter 1st number: 6
Enter 2nd number: 18
LCM is 18

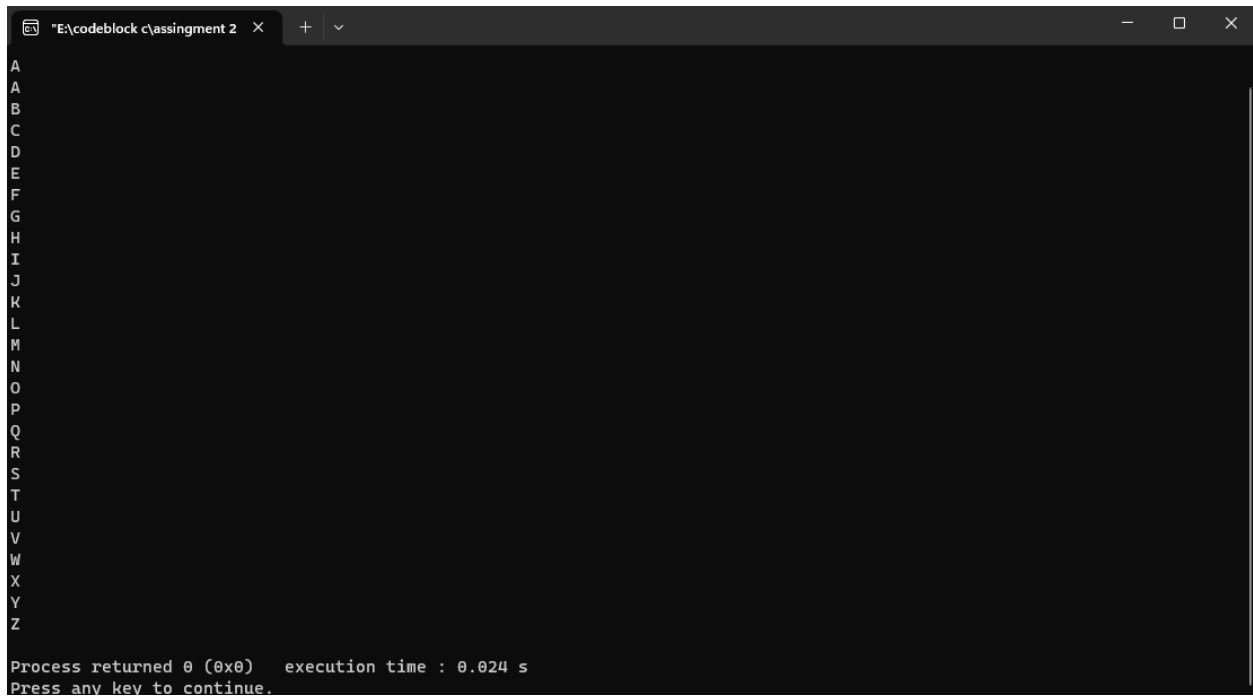
Process returned 0 (0x0)   execution time : 5.840 s
Press any key to continue.
```

C Program to Display Characters from A to Z Using Loop

```
#include<stdio.h>

int main()
{

    int i,n;
    char c;
    n=90;
    printf("All alphabetic from A to Z are: \n");
    for(i=65;i<=n;i++)
    {
        printf("%c\n",i);
    }
}
```



```
"E:\codeblock c\assignment 2" x + v
A
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z

Process returned 0 (0x0)   execution time : 0.024 s
Press any key to continue.
```

C Program to Count Number of Digits in an Integer

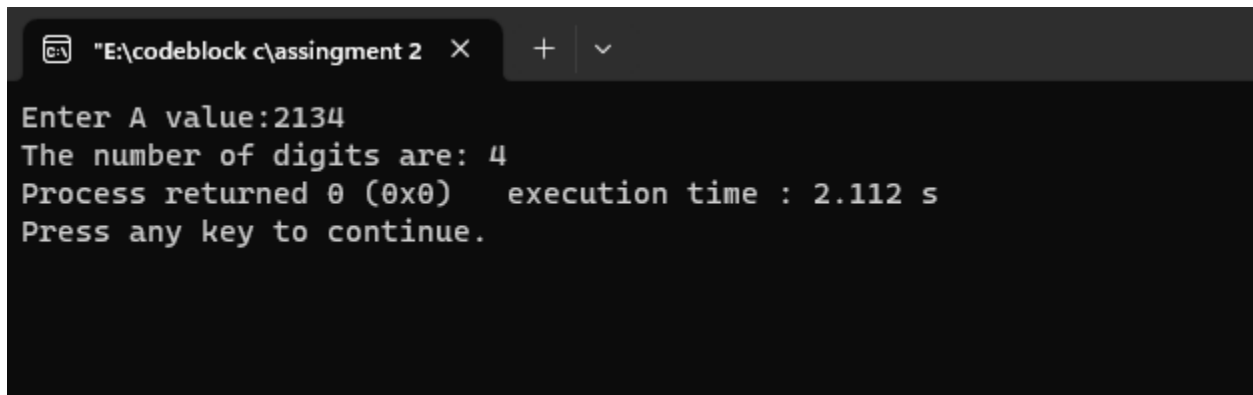
```
#include<stdio.h>

int main()
{
    int n,count=0;

    printf("Enter A value:");
    scanf("%d",&n);
    while(n!=0)
    {
        n=n/10;
        count++;
    }

    printf("The number of digits are: %d",count);

}
```



The screenshot shows a code editor window with a single tab titled "E:\codeblock c\assingment 2". The editor displays the C program code. Below the code, the output of the program is shown in a terminal-like window. The output indicates that the user entered the value 2134, and the program correctly counted 4 digits. It also shows the process returned 0 (0x0) and the execution time was 2.112 seconds. The prompt "Press any key to continue." is visible at the bottom of the output window.

```
"E:\codeblock c\assingment 2" X + v
Enter A value:2134
The number of digits are: 4
Process returned 0 (0x0)   execution time : 2.112 s
Press any key to continue.
```


C Program to Reverse a Number

```
#include<stdio.h>

int main()
{
    int n,count=0;

    printf("Enter A value:");

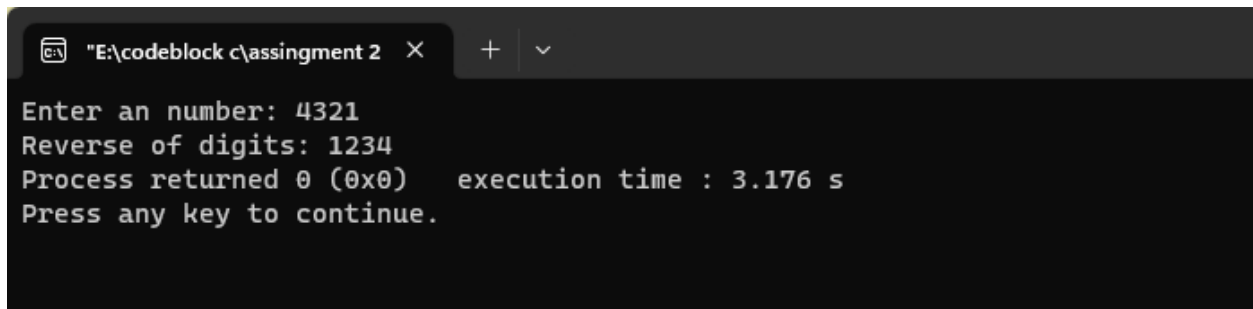
    scanf("%d",&n);

    while(n!=0)
    {
        n=n/10;

        count++;
    }

    printf("The number of digits are: %d",count);

}
```



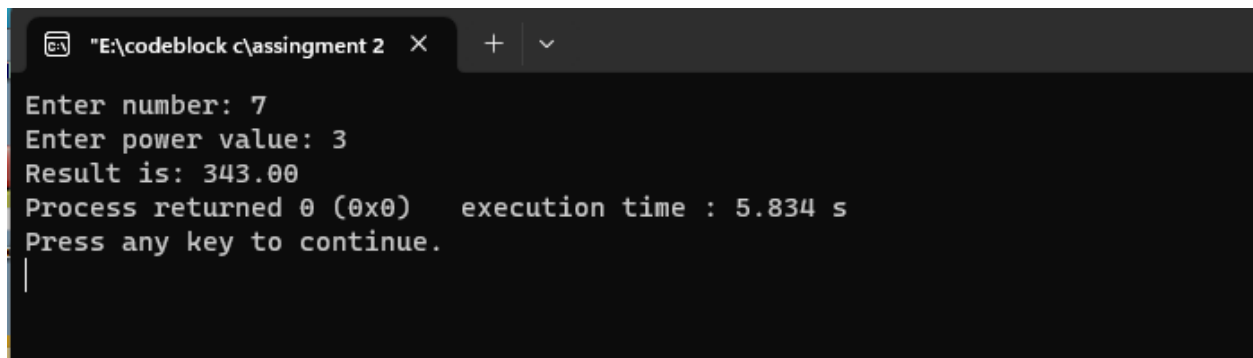
The screenshot shows a code editor window with a single tab titled "E:\codeblock c\assingment 2". The editor contains the C program code from the previous block. Below the code, the output of the program is displayed in a terminal-like window. The output shows the user entering the number 4321, the program calculating the reverse of digits as 1234, and reporting the execution time as 3.176 seconds. The program ends with a prompt to press any key to continue.

```
"E:\codeblock c\assingment 2" × + ▾
Enter an number: 4321
Reverse of digits: 1234
Process returned 0 (0x0)   execution time : 3.176 s
Press any key to continue.
```

C Program to Calculate the Power of a Number

```
#include<stdio.h>

int main()
{ //x=number;y=power
    double x,y,result;
    printf("Enter number: ");
    scanf("%lf",&x);
    printf("Enter power value: ");
    scanf("%lf",&y);
    result=pow(x,y);
    printf("Result is: %0.2lf",result);
    return 0;
}
```



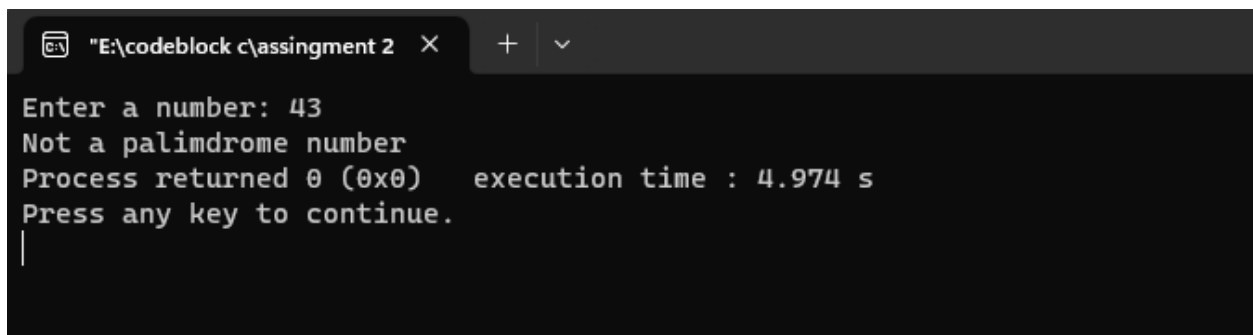
The screenshot shows a Code::Blocks IDE window with the title bar "E:\codeblock c\assingment 2". The console output displays the program's execution: it prompts for a number (7) and a power value (3), calculates the result (343.00), and shows the execution time (5.834 s). The window also indicates that the process returned 0 (0x0) and prompts the user to press any key to continue.

```
"E:\codeblock c\assingment 2" X + v
Enter number: 7
Enter power value: 3
Result is: 343.00
Process returned 0 (0x0)   execution time : 5.834 s
Press any key to continue.
|
```

C Program to Check Whether a Number is Palindrome or Not

```
#include<stdio.h>

int main()
{
    int n,num,r,sum=0;
    printf("Enter a number: ");
    scanf("%d",&num);
    n=num;
    while(n!=0)
    {
        r=n%10;
        sum=sum*10+r;
        n=n/10;
    }
    if(sum==num)
        printf("This is a Palindrome number");
    else
        printf("Not a palimdrome number");
    return 0;
}
```

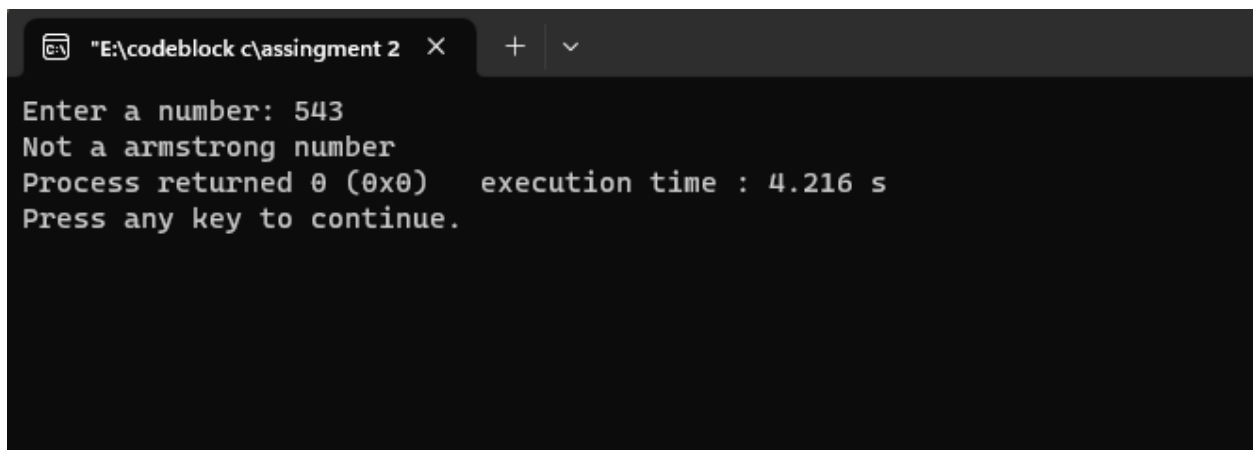


```
"E:\codeblock c\assingment 2" X + v
Enter a number: 43
Not a palimdrome number
Process returned 0 (0x0)   execution time : 4.974 s
Press any key to continue.
|
```

C Program to Check Armstrong Number

```
#include<stdio.h>

int main()
{
    int n,num,temp=0,r;
    printf("Enter a number: ");
    scanf("%d",&n);
    num=n;
    while(num!=0)
    {
        r=num%10;
        temp=temp+(r*r*r);
        num=num/10;
    }
    if(temp==n)
        printf("The number is a armstrong number");
    else
        printf("Not a armstrong number");
    return 0;
}
```



The screenshot shows a terminal window with a dark background. The title bar at the top reads "E:\codeblock c\assingment 2" with a close button (X) and window control buttons (+ and v). The terminal output is as follows:

```
Enter a number: 543
Not a armstrong number
Process returned 0 (0x0)   execution time : 4.216 s
Press any key to continue.
```

C Program to Make a Simple Calculator Using switch...case

```
#include<stdio.h>

int main()
{
    float sum,sub,mul,div;

    int a,b,n;

    printf("Main menu:\n1.SUM\n2.SUB\n3.MULTIPLICATION\n4.DIVISION\nEnter your choice: ");
    scanf("%d",&n);

    switch(n)
    {
        case 1:
            {printf("Enter 1st value:");
              scanf("%d",&a);
              printf("Enter 1st value:");
              scanf("%d",&b);
              sum=a+b;
              printf("Sum is: %0.2f",sum);}

            break;
        case 2:
            {printf("Enter 1st value:");
              scanf("%d",&a);
              printf("Enter 1st value:");
              scanf("%d",&b);
              sub=a-b;
              printf("Sub is: %0.2f",sub);}

            break;
        case 3:
            {printf("Enter 1st value:");
```

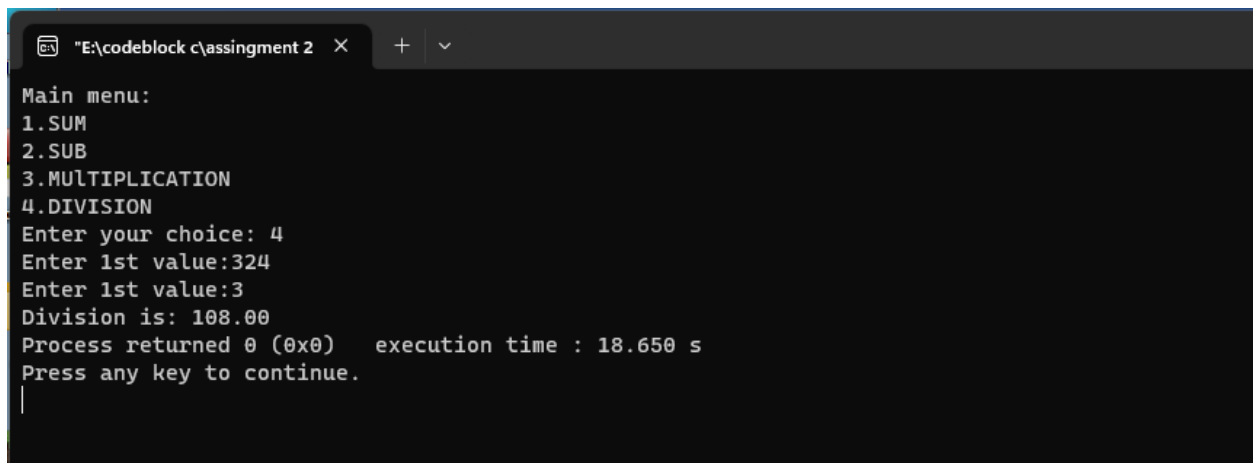
```
scanf("%d",&a);  
printf("Enter 1st value:");  
scanf("%d",&b);  
mul=a*b;  
printf("Multiplication is: %0.2f",mul);}  
break;
```

case 4:

```
{printf("Enter 1st value:");  
scanf("%d",&a);  
printf("Enter 1st value:");  
scanf("%d",&b);  
div=a/b;  
printf("Division is: %0.2f",div);}  
break;
```

```
}
```

```
}
```



```
"E:\codeblock c\assingment 2" X + v  
Main menu:  
1.SUM  
2.SUB  
3.MULTIPLICATION  
4.DIVISION  
Enter your choice: 4  
Enter 1st value:324  
Enter 1st value:3  
Division is: 108.00  
Process returned 0 (0x0)   execution time : 18.650 s  
Press any key to continue.  
|
```