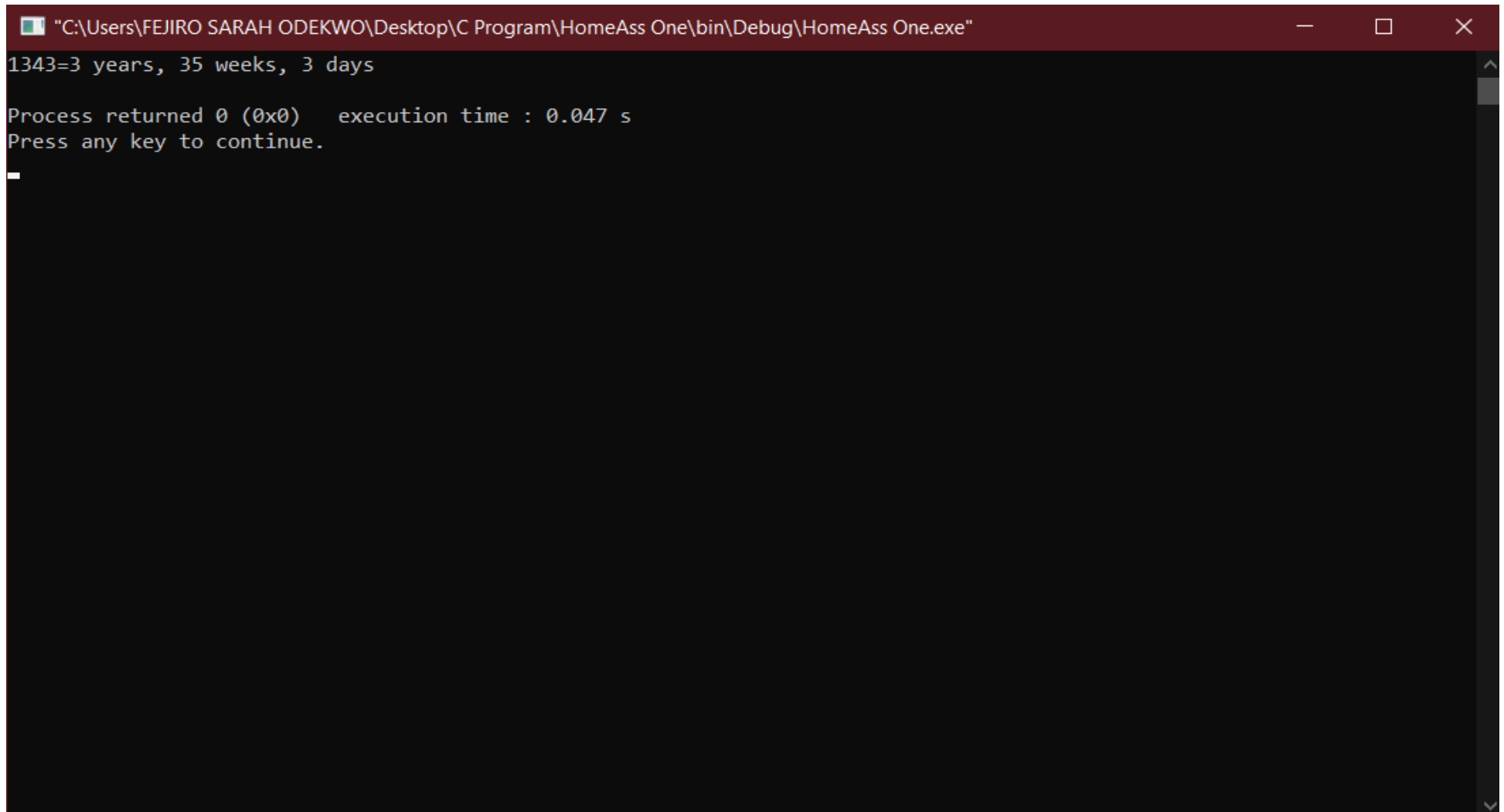


1.

```
*Untitled - Notepad
File Edit Format View Help
/*This is a C program that converts 1343 days into years,weeks and days.*/
#include <stdio.h>
#include <stdlib.h>

int main()
{
    int n, years, weeks, days;
    n=1343;
    years=n/365;
    weeks=(n%365)/7;
    days=(n%365)%7;
    printf("%d=%d years, %d weeks, %d days\n", n,years,weeks,days);
    return 0;
}
```

Output:

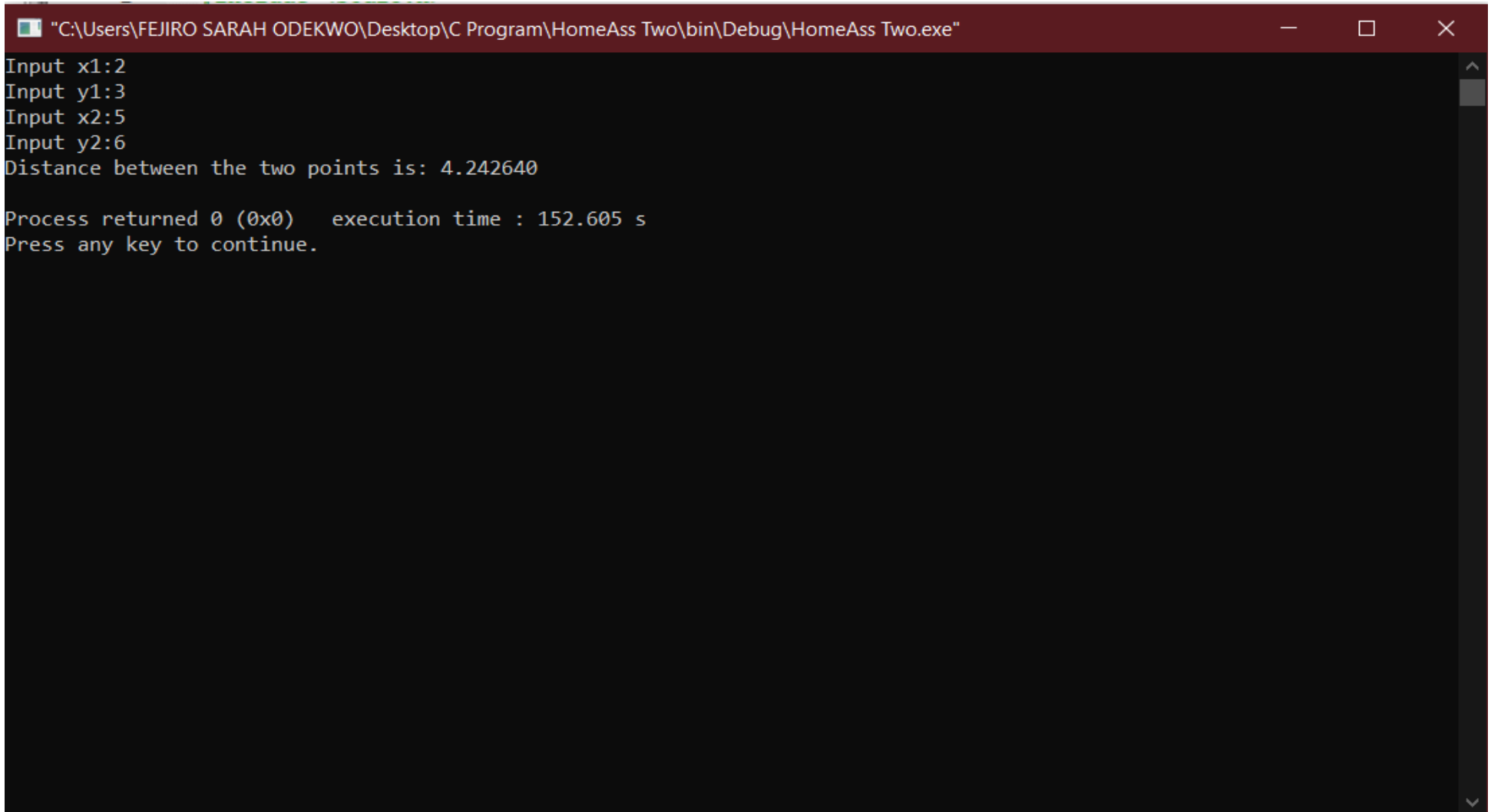
A screenshot of a Windows command prompt window. The title bar at the top is dark red and contains the text: "C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss One\bin\Debug\HomeAss One.exe". The window content is black with white text. The first line of output is "1343=3 years, 35 weeks, 3 days". The second line is "Process returned 0 (0x0) execution time : 0.047 s". The third line is "Press any key to continue.". A small white cursor is visible on the line "Press any key to continue.". The window has standard Windows window controls (minimize, maximize, close) in the top right corner.

```
"C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss One\bin\Debug\HomeAss One.exe"  
1343=3 years, 35 weeks, 3 days  
Process returned 0 (0x0) execution time : 0.047 s  
Press any key to continue.  
_
```

2.

```
main - Notepad
File Edit Format View Help
/*This is a C program that calculates the distance between two points.*/
#include <stdio.h>
#include <stdlib.h>
#include <math.h>
int main()
{
    float x1,y1,x2,y2,distance;
    printf("Input x1:");
    scanf("%f", &x1);
    printf("Input y1:");
    scanf("%f", &y1);
    printf("Input x2:");
    scanf("%f", &x2);
    printf("Input y2:");
    scanf("%f", &y2);
    distance=sqrt(((x2-x1)*(x2-x1))+((y2-y1)*(y2-y1)));
    printf("Distance between the two points is: %f", distance);
    printf("\n");
    return 0;
}
```

Output:



```
"C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss Two\bin\Debug\HomeAss Two.exe"
Input x1:2
Input y1:3
Input x2:5
Input y2:6
Distance between the two points is: 4.242640

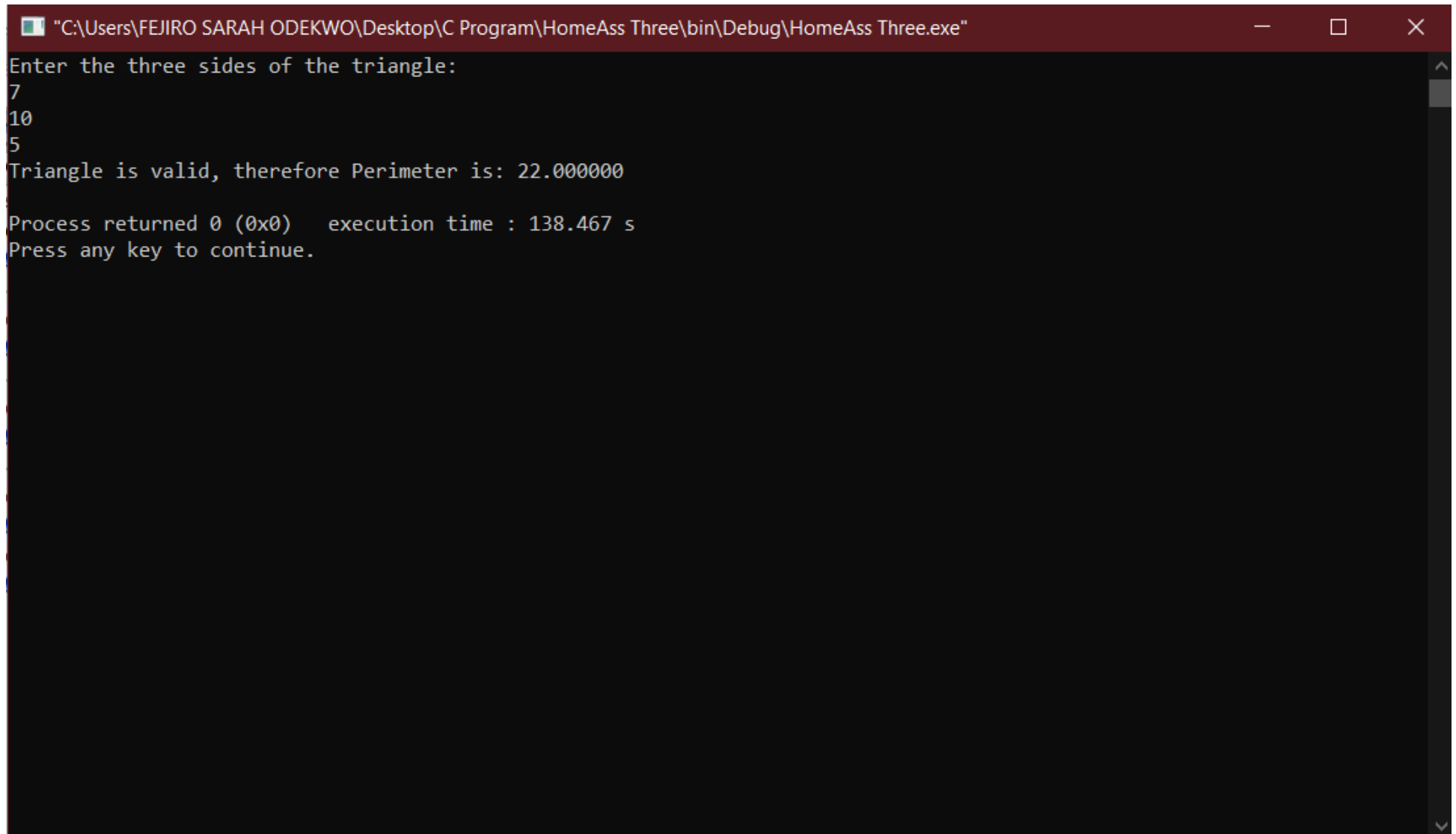
Process returned 0 (0x0)   execution time : 152.605 s
Press any key to continue.
```

3.

```
main - Notepad
File Edit Format View Help
/*This is a c program that reads three floating values, checks if it is possible to make a
triangle with them and also calculates the perimeter of the triangle if the said values are valid.*/
#include <stdio.h>
#include <stdlib.h>

int main()
{
    float a,b,c,Perimeter;
    printf("Enter the three sides of the triangle: \n");
    scanf("%f %f %f", &a,&b,&c);
    if((a+b)>c)
    {
        if((b+c)>a)
        {
            if((a+c)>b)
            {
                Perimeter=a+b+c;
                printf("Triangle is valid, therefore Perimeter is: %f \n", Perimeter);
            }
            else
            {
                printf("Triangle is not valid. Perimeter can't be found.");
            }
        }
        else
        {
            printf("Triangle is not valid. Perimeter can't be found.");
        }
    }
    else
    {
        printf("Triangle is not valid. Perimeter can't be found.");
    }
    return 0;
}
```

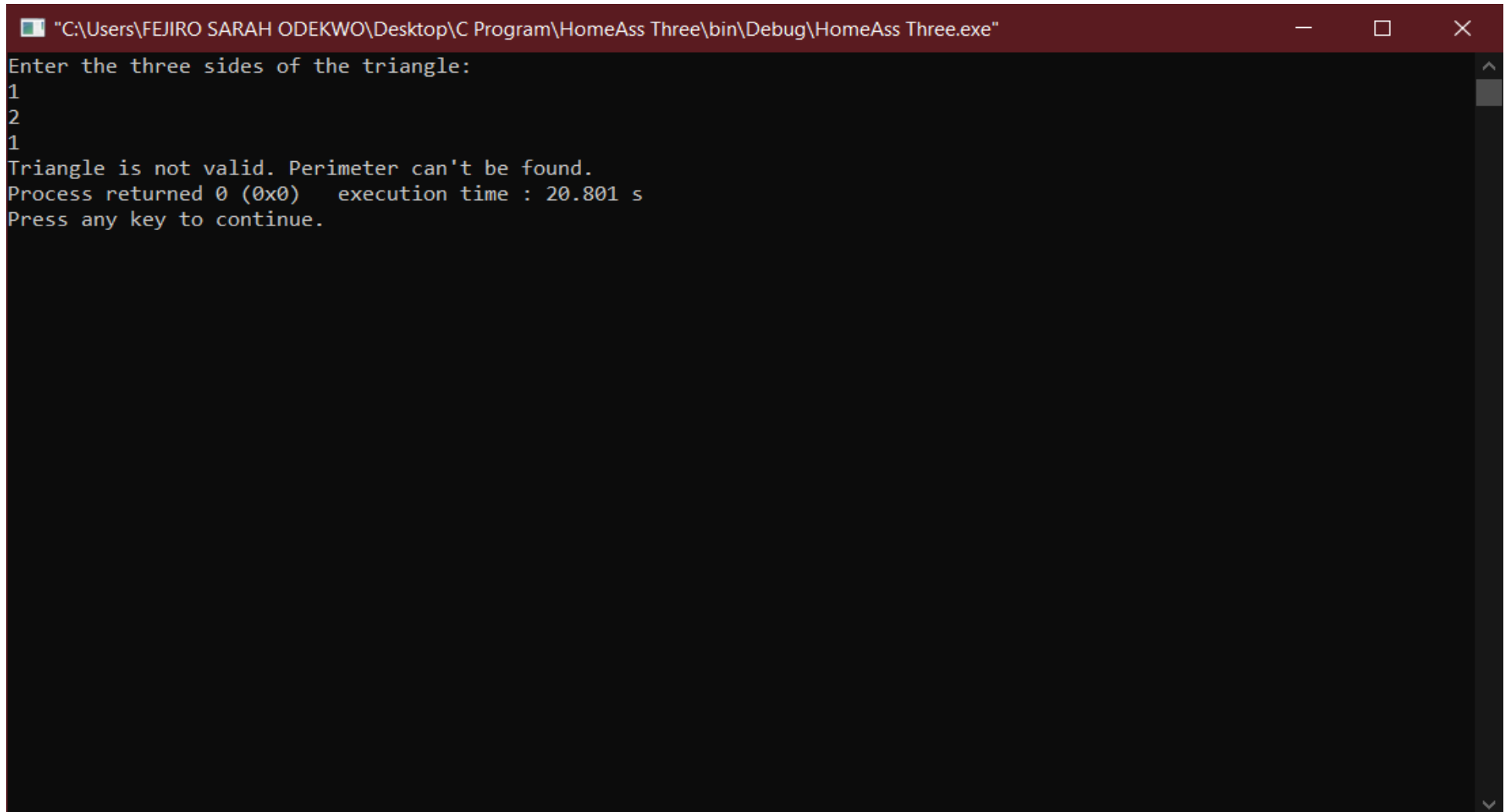
Output A: With Valid Test data



```
"C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss Three\bin\Debug\HomeAss Three.exe"
Enter the three sides of the triangle:
7
10
5
Triangle is valid, therefore Perimeter is: 22.000000

Process returned 0 (0x0)   execution time : 138.467 s
Press any key to continue.
```

Output B: With Invalid Test Data



```
"C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss Three\bin\Debug\HomeAss Three.exe"
Enter the three sides of the triangle:
1
2
1
Triangle is not valid. Perimeter can't be found.
Process returned 0 (0x0)   execution time : 20.801 s
Press any key to continue.
```

4.

```
main - Notepad
File Edit Format View Help
/*This is a C program to read the age of 20 people and count the total Baby Age, School Age and Adult Age.*/
#include <stdio.h>
#include <stdlib.h>

int main()
{
    int age;
    int baby=0, school=0, adult=0;
    int count=0;

    while(count<20)
    {
        printf("Enter person's age[%d]:", count+1);
        scanf("%d", &age);
        if (age>=0 && age<=4)
            baby++;
        else if(age>=5 && age<=17)
            school++;
        else
            adult++;
        count++;
    }
    printf("Baby Age: %d\n", baby);
    printf("School Age: %d\n", school);
    printf("Adult Age: %d\n", adult);
    return 0;
}
```



Output:

```
"C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss Four\bin\Debug\HomeAss Four.exe"
Enter person's age[1]:0
Enter person's age[2]:1
Enter person's age[3]:2
Enter person's age[4]:3
Enter person's age[5]:4
Enter person's age[6]:5
Enter person's age[7]:6
Enter person's age[8]:7
Enter person's age[9]:8
Enter person's age[10]:9
Enter person's age[11]:10
Enter person's age[12]:11
Enter person's age[13]:12
Enter person's age[14]:13
Enter person's age[15]:14
Enter person's age[16]:15
Enter person's age[17]:16
Enter person's age[18]:17
Enter person's age[19]:18
Enter person's age[20]:19
Baby Age: 5
School Age: 13
Adult Age: 2

Process returned 0 (0x0)   execution time : 45.209 s
Press any key to continue.

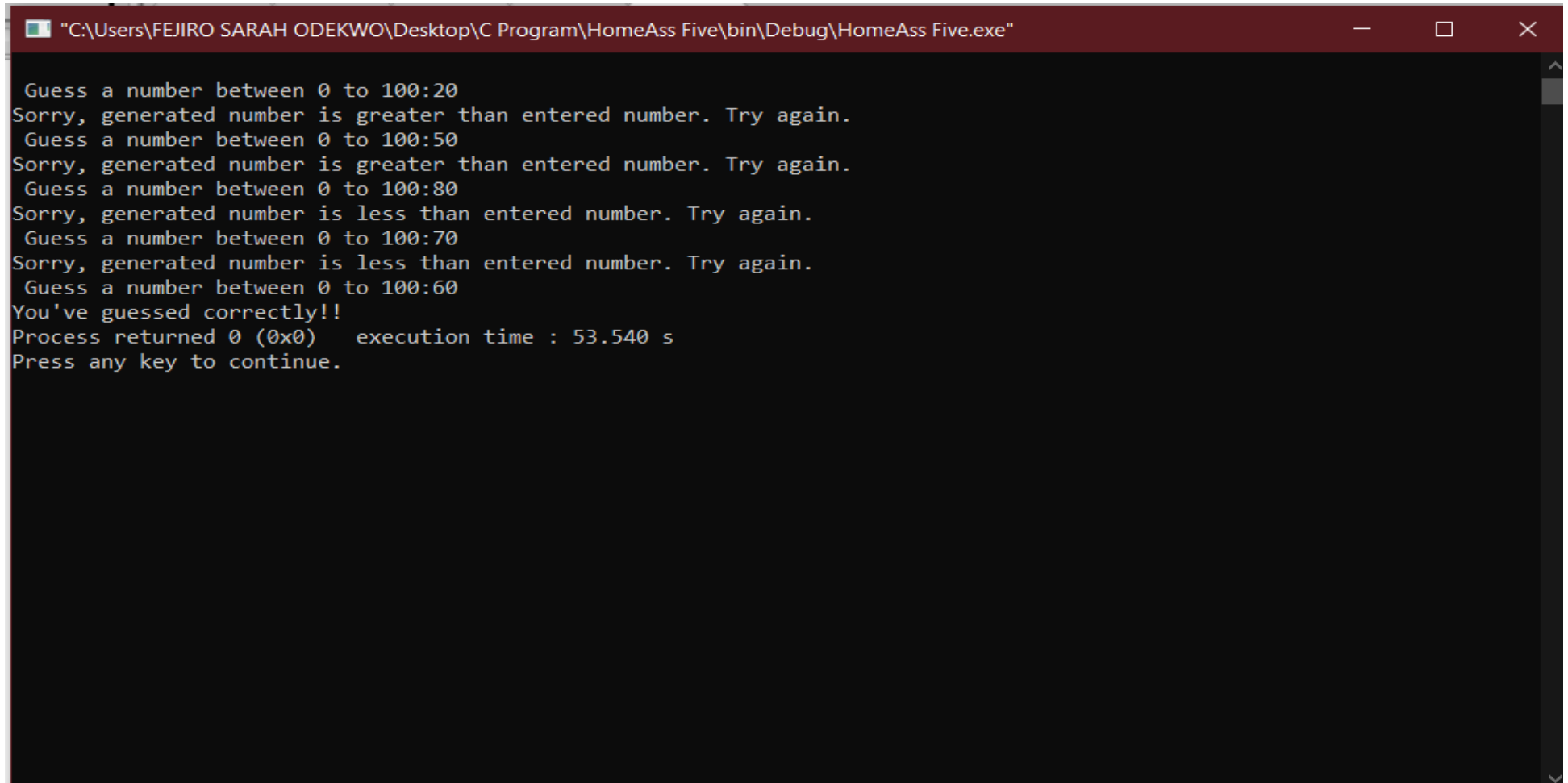
```

5.

```
main - Notepad
File Edit Format View Help
/* This is a C program that allows the user to guess a random number between 0 to 100*/
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int main()
{
    int random_num=0, count=0,n;
    int stime;
    long ltime;
    ltime=time(NULL);
    stime=(unsigned) ltime/2;
    srand(stime);
    random_num=rand()%100;

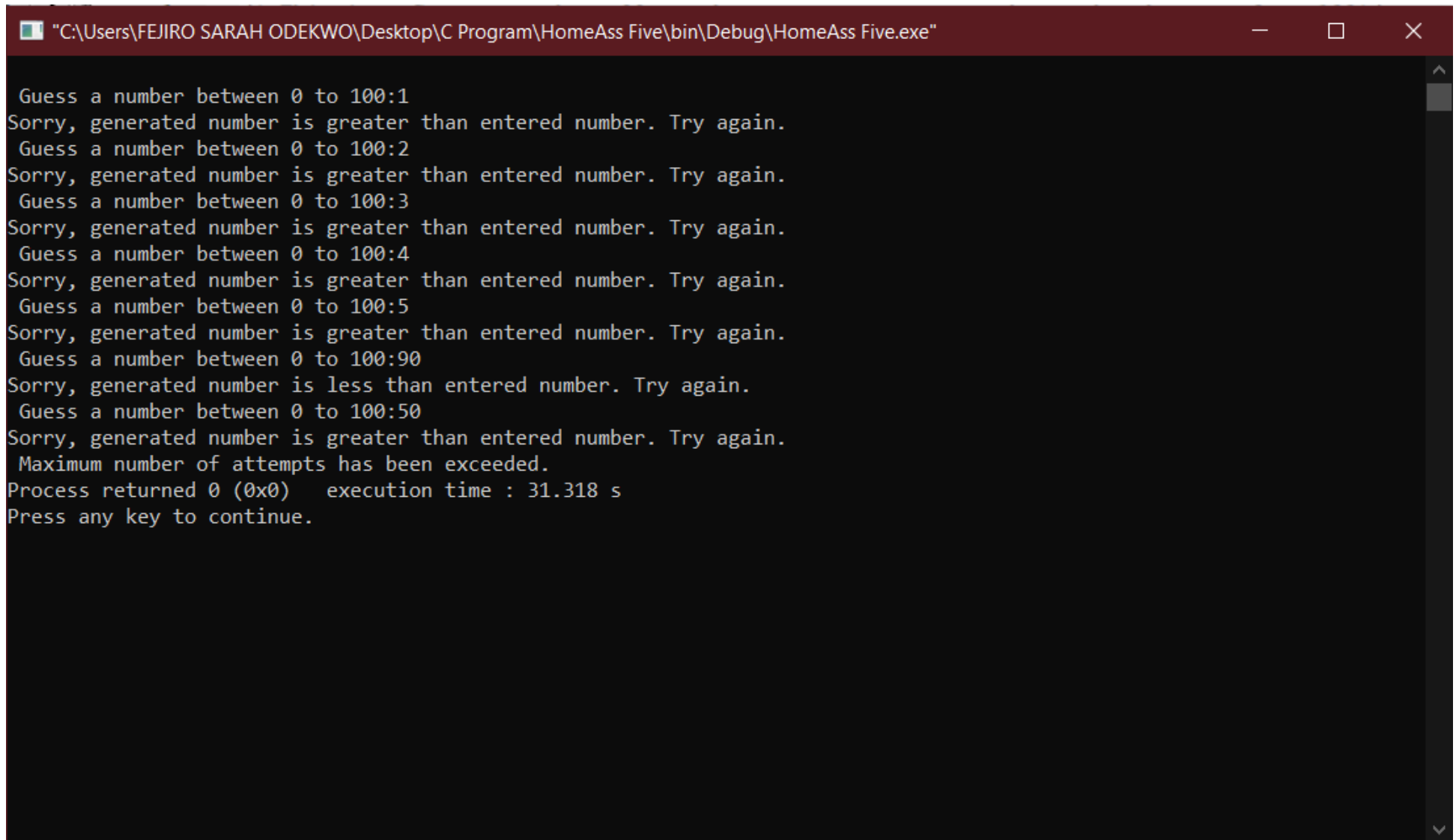
    while(1){
        count+=1;
        printf("\n Guess a number between 0 to 100:");
        scanf("%d",&n);
        if(random_num==n){
            printf("You've guessed correctly!!");
            break;
        }
        else if(random_num<n){
            printf("Sorry, generated number is less than entered number. Try again.");
        }
        else if(random_num>n){
            printf("Sorry, generated number is greater than entered number. Try again.");
        }
        if(count==7)
        {
            printf("\n Maximum number of attempts has been exceeded.");
            break;
        }
    }
    return 0;
}
```

Output A: With Valid Test Data



```
"C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss Five\bin\Debug\HomeAss Five.exe"
Guess a number between 0 to 100:20
Sorry, generated number is greater than entered number. Try again.
Guess a number between 0 to 100:50
Sorry, generated number is greater than entered number. Try again.
Guess a number between 0 to 100:80
Sorry, generated number is less than entered number. Try again.
Guess a number between 0 to 100:70
Sorry, generated number is less than entered number. Try again.
Guess a number between 0 to 100:60
You've guessed correctly!!
Process returned 0 (0x0)   execution time : 53.540 s
Press any key to continue.
```

Output B: With Invalid Test Data



```
"C:\Users\FEJIRO SARAH ODEKWO\Desktop\C Program\HomeAss Five\bin\Debug\HomeAss Five.exe"

Guess a number between 0 to 100:1
Sorry, generated number is greater than entered number. Try again.
Guess a number between 0 to 100:2
Sorry, generated number is greater than entered number. Try again.
Guess a number between 0 to 100:3
Sorry, generated number is greater than entered number. Try again.
Guess a number between 0 to 100:4
Sorry, generated number is greater than entered number. Try again.
Guess a number between 0 to 100:5
Sorry, generated number is greater than entered number. Try again.
Guess a number between 0 to 100:90
Sorry, generated number is less than entered number. Try again.
Guess a number between 0 to 100:50
Sorry, generated number is greater than entered number. Try again.
Maximum number of attempts has been exceeded.
Process returned 0 (0x0)   execution time : 31.318 s
Press any key to continue.
```