

QUESTION 1 ANSWER ABOVE;

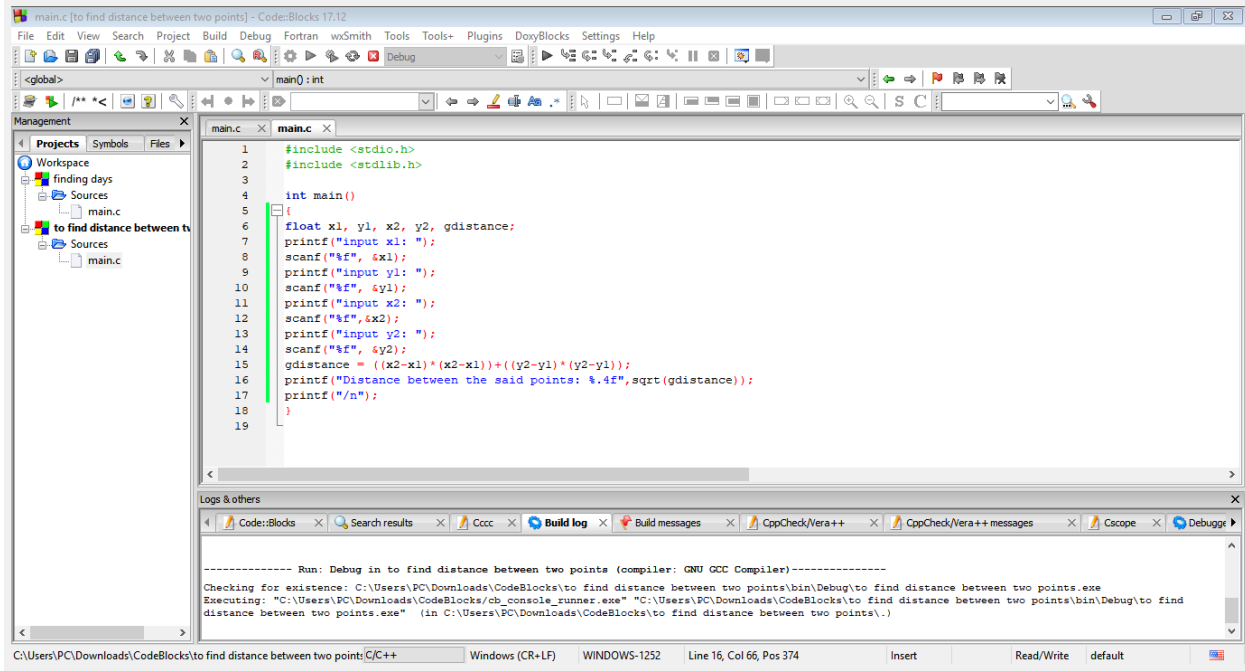
Write a C program to convert 1343 days into years, weeks and plays and days.(Note: ignore leap year).

QUESTION 2

Write C program to calculate the distance between the two points, Note: x_1, y_1, x_2, y_2 are double values

Formula

SOLUTION

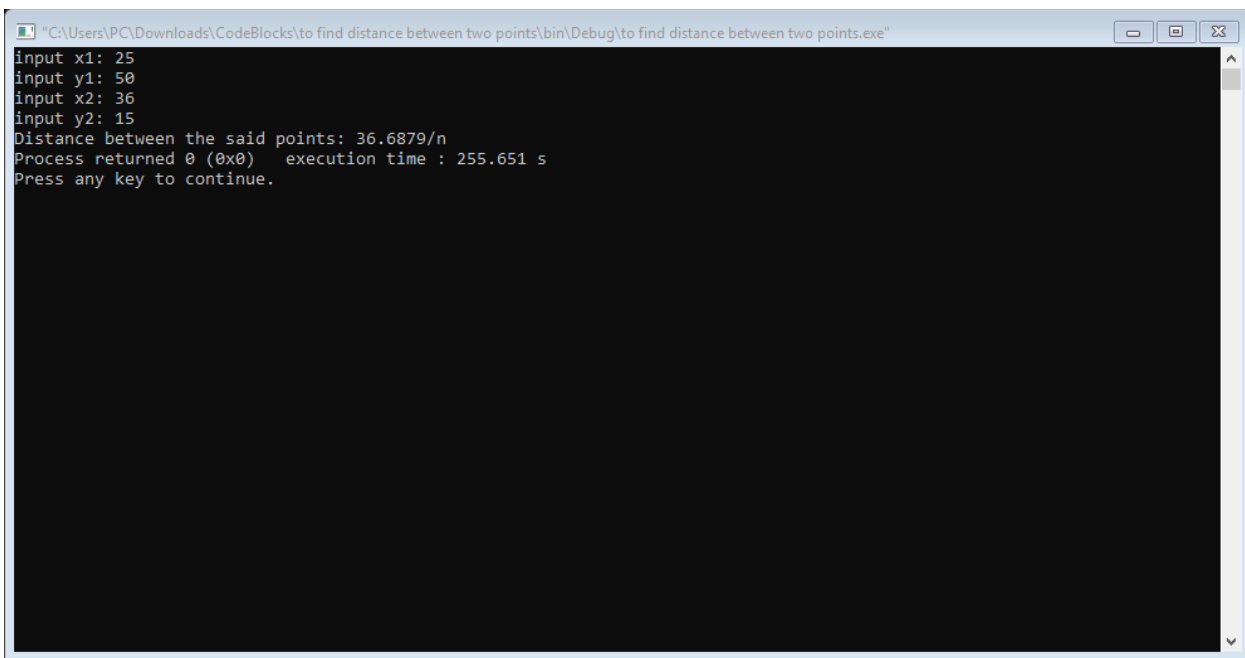


The screenshot shows the Code::Blocks IDE with a C program open in the editor. The program calculates the distance between two points using the Euclidean distance formula. The variables x_1, y_1, x_2, y_2 are declared as floats. The program prompts the user to input these values and then calculates the distance using the formula $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$. The output shows the distance as 36.6879.

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     float x1, y1, x2, y2, gdistance;
7     printf("input x1: ");
8     scanf("%f", &x1);
9     printf("input y1: ");
10    scanf("%f", &y1);
11    printf("input x2: ");
12    scanf("%f", &x2);
13    printf("input y2: ");
14    scanf("%f", &y2);
15    gdistance = ((x2-x1)*(x2-x1)) + ((y2-y1)*(y2-y1));
16    printf("Distance between the said points: %.4f", sqrt(gdistance));
17    printf("\n");
18 }
19
```

The console output shows the following:

```
Run: Debug in to find distance between two points (compiler: GNU GCC Compiler)-----
Checking for existence: C:\Users\PC\Downloads\CodeBlocks\to find distance between two points\bin\Debug\to find distance between two points.exe
Executing: "C:\Users\PC\Downloads\CodeBlocks\cb_console_runner.exe" "C:\Users\PC\Downloads\CodeBlocks\to find distance between two points\bin\Debug\to find distance between two points.exe" (in C:\Users\PC\Downloads\CodeBlocks\to find distance between two points\.)
```

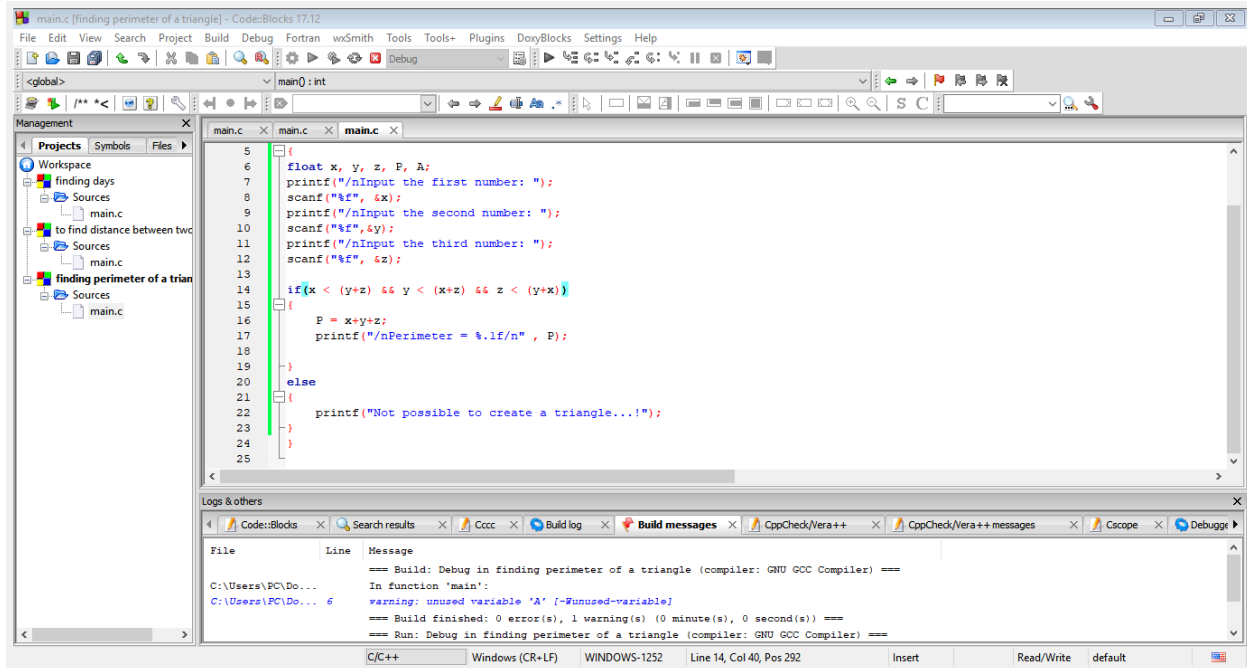


The screenshot shows the command prompt window with the following output:

```
"C:\Users\PC\Downloads\CodeBlocks\to find distance between two points\bin\Debug\to find distance between two points.exe"
input x1: 25
input y1: 50
input x2: 36
input y2: 15
Distance between the said points: 36.6879/n
Process returned 0 (0x0)   execution time : 255.651 s
Press any key to continue.
```

QUESTION 3

Write a C program that reads three floating values and check if it is possible to make a triangle with them. Also, calculate the perimeter of the triangle if the said values are valid.

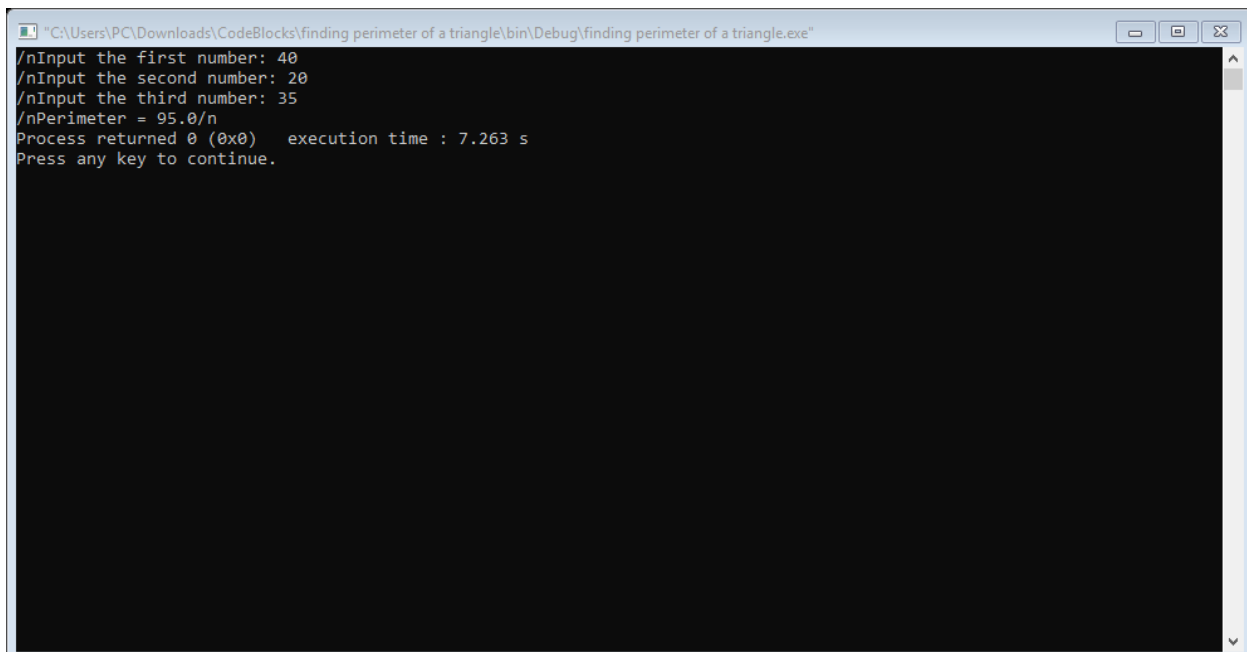


The screenshot shows the Code::Blocks IDE with a C program open. The program prompts the user to input three floating-point numbers (x, y, z) and checks if they can form a triangle. If they can, it calculates the perimeter (P = x + y + z) and prints it. If not, it prints "Not possible to create a triangle...!". The IDE also shows a project tree on the left and a console window at the bottom.

```
5 {
6     float x, y, z, P, A;
7     printf("/nInput the first number: ");
8     scanf("%f", &x);
9     printf("/nInput the second number: ");
10    scanf("%f", &y);
11    printf("/nInput the third number: ");
12    scanf("%f", &z);
13
14    if(x < (y+z) && y < (x+z) && z < (y+x))
15    {
16        P = x+y+z;
17        printf("/nPerimeter = %.1f/n", P);
18    }
19    else
20    {
21        printf("Not possible to create a triangle...!");
22    }
23 }
24
25
```

Build messages:

```
==== Build: Debug in finding perimeter of a triangle (compiler: GNU GCC Compiler) ====
In function 'main':
C:\Users\PC\Do... 6    warning: unused variable 'A' [-Wunused-variable]
==== Build finished: 0 error(s), 1 warning(s) (0 minute(s), 0 second(s)) ====
==== Run: Debug in finding perimeter of a triangle (compiler: GNU GCC Compiler) ====
```

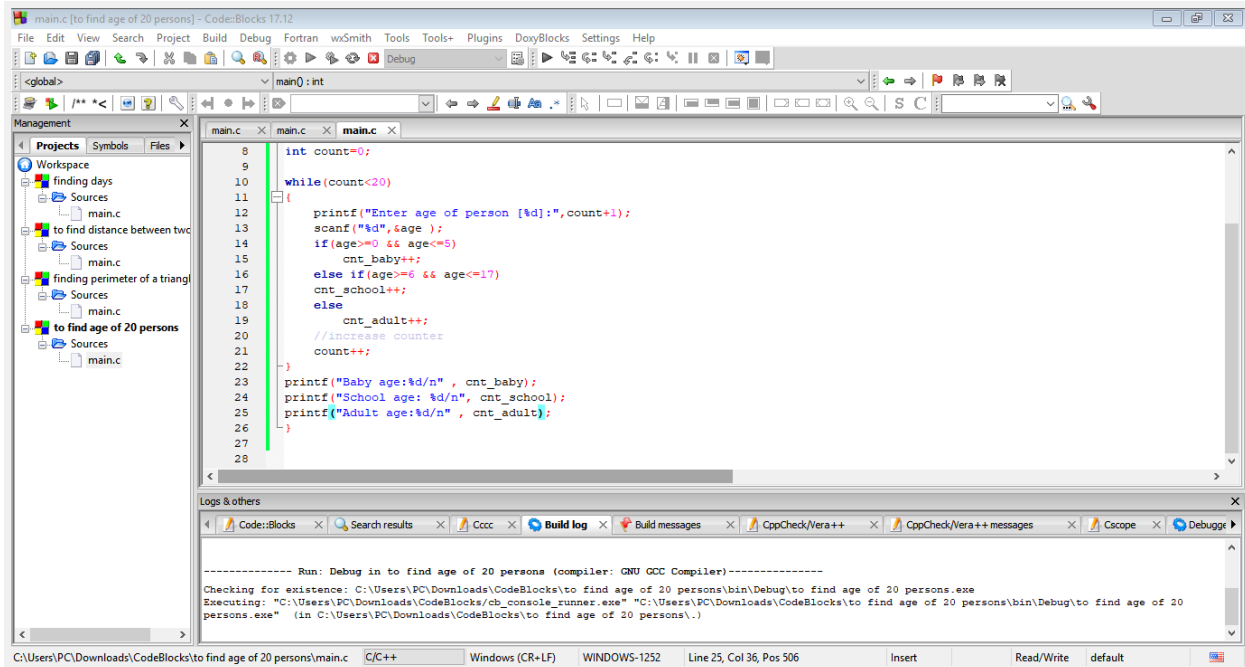


The screenshot shows the output of the program in the console window. The user has input three numbers: 40, 20, and 35. The program has calculated the perimeter as 95.0 and printed it. The console also shows the execution time and a prompt to press any key to continue.

```
"C:\Users\PC\Downloads\CodeBlocks\finding perimeter of a triangle\bin\Debug\finding perimeter of a triangle.exe"
/nInput the first number: 40
/nInput the second number: 20
/nInput the third number: 35
/nPerimeter = 95.0/n
Process returned 0 (0x0)   execution time : 7.263 s
Press any key to continue.
```

QUESTION 4

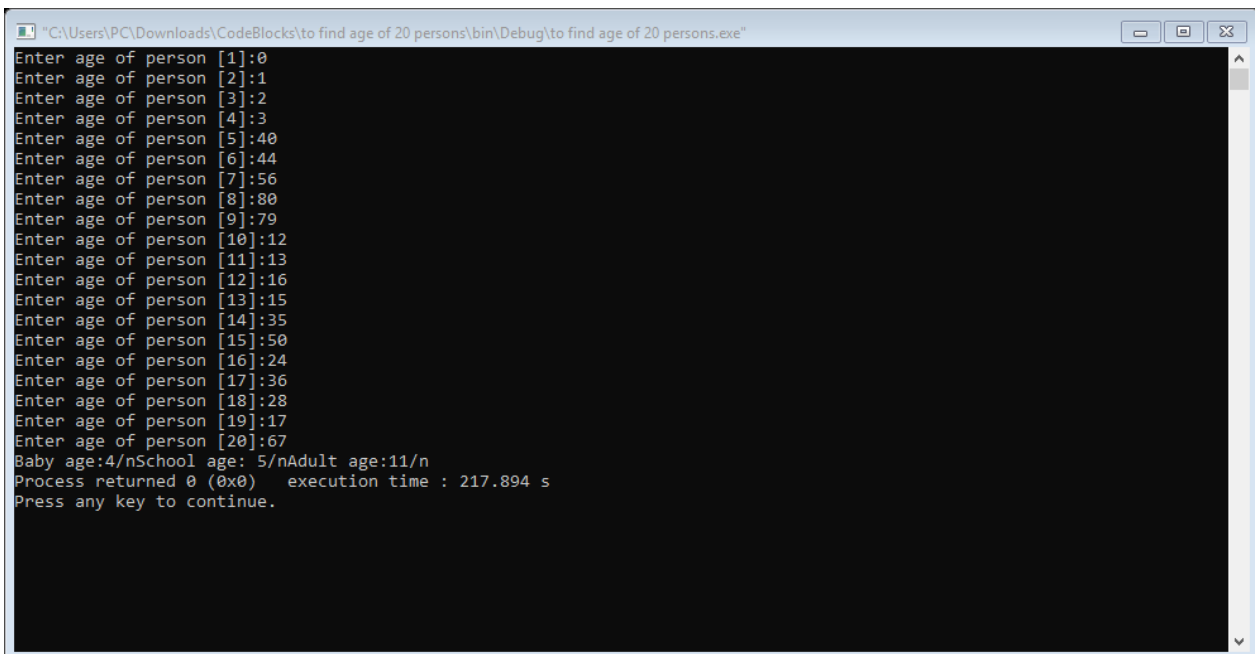
Write a C program to read age of 20 people and count total Baby age, school age and Adult age



The screenshot shows the Code::Blocks IDE with a C program open. The program is designed to read the ages of 20 people and categorize them into Baby, School, and Adult groups. The code is as follows:

```
8 int count=0;
9
10 while(count<20)
11 {
12     printf("Enter age of person [%d]:",count+1);
13     scanf("%d",&age);
14     if(age>=0 && age<=5)
15         cnt_baby++;
16     else if(age>=6 && age<=17)
17         cnt_school++;
18     else
19         cnt_adult++;
20     //increase counter
21     count++;
22 }
23 printf("Baby age:%d/n", cnt_baby);
24 printf("School age: %d/n", cnt_school);
25 printf("Adult age:%d/n", cnt_adult);
26
27
28
```

The IDE's status bar at the bottom indicates the file path: C:\Users\PC\Downloads\CodeBlocks\to find age of 20 persons\main.c, and the current line is 25, column 36, position 506.

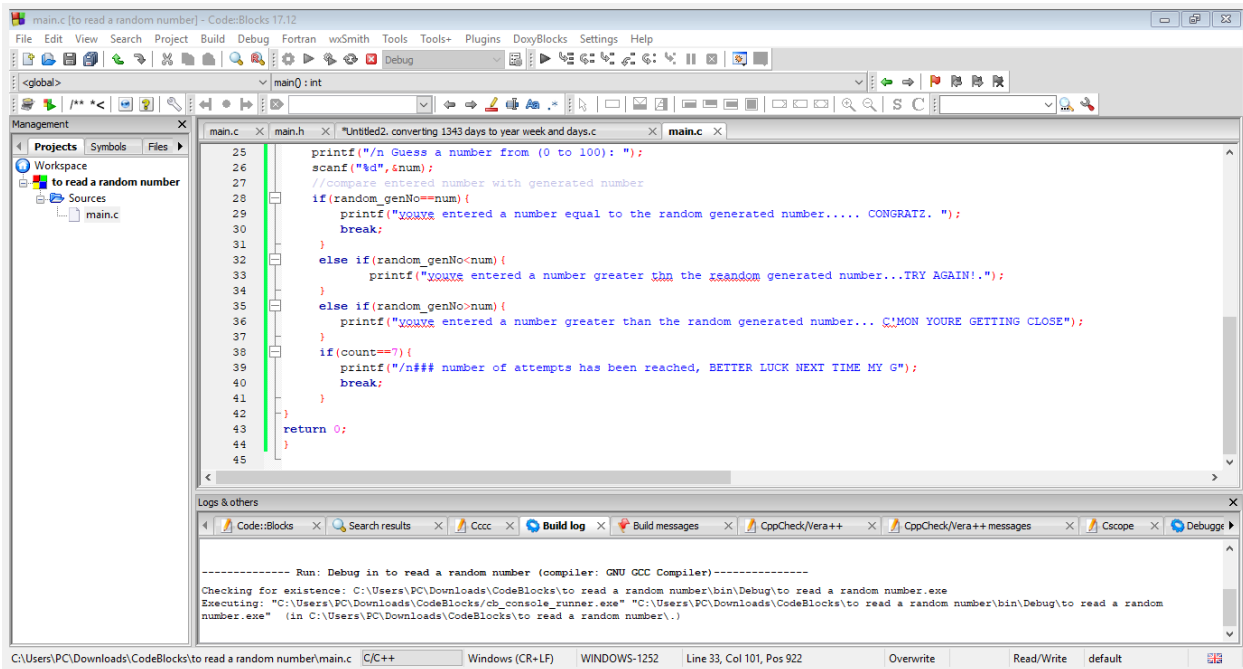


The screenshot shows the output of the program in a command prompt window. The program prompts the user to enter the age of 20 people. The input values are: 0, 1, 2, 3, 40, 44, 56, 80, 79, 12, 13, 16, 15, 35, 50, 24, 36, 28, 17, 67. The program then outputs the counts for each category: Baby age: 4, School age: 5, and Adult age: 11. The execution time is 217.894 seconds.

```
Enter age of person [1]:0
Enter age of person [2]:1
Enter age of person [3]:2
Enter age of person [4]:3
Enter age of person [5]:40
Enter age of person [6]:44
Enter age of person [7]:56
Enter age of person [8]:80
Enter age of person [9]:79
Enter age of person [10]:12
Enter age of person [11]:13
Enter age of person [12]:16
Enter age of person [13]:15
Enter age of person [14]:35
Enter age of person [15]:50
Enter age of person [16]:24
Enter age of person [17]:36
Enter age of person [18]:28
Enter age of person [19]:17
Enter age of person [20]:67
Baby age:4/nSchool age: 5/nAdult age:11/n
Process returned 0 (0x0)   execution time : 217.894 s
Press any key to continue.
```

QUESTION 5

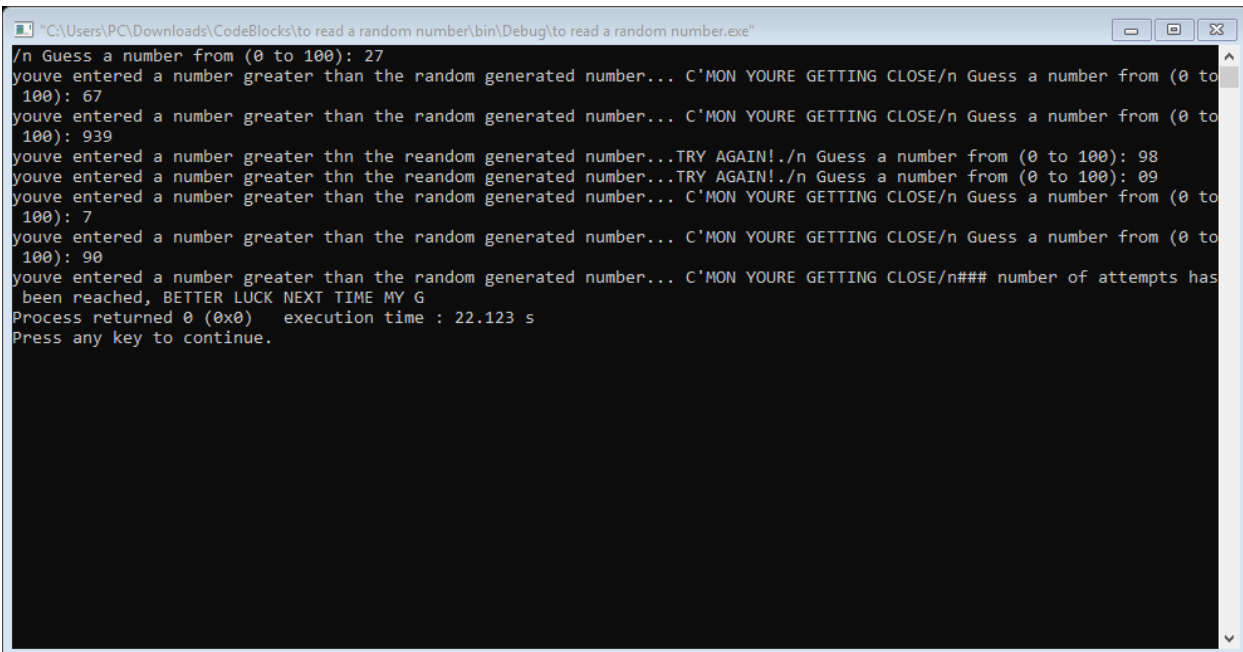
Write a C program to read a random number and then ask user to guess it (from 0 to 100)



The screenshot shows the Code::Blocks IDE with a C program open. The program generates a random number and asks the user to guess it. The code is as follows:

```
25 printf("/n Guess a number from (0 to 100): ");
26 scanf("%d",&num);
27 //compare entered number with generated number
28 if(random_genNo==num){
29     printf("youve entered a number equal to the random generated number..... CONGRATZ. ");
30     break;
31 }
32 else if(random_genNo<num){
33     printf("youve entered a number greater thn the xrandom generated number...TRY AGAIN!.");
34 }
35 else if(random_genNo>num){
36     printf("youve entered a number greater than the random generated number... C'MON YOURE GETTING CLOSE");
37 }
38 if(count==7){
39     printf("/n### number of attempts has been reached, BETTER LUCK NEXT TIME MY G");
40     break;
41 }
42 }
43 return 0;
44 }
```

The IDE also shows the project structure on the left and the build logs at the bottom, indicating that the program was compiled successfully using the GNU GCC Compiler.



The screenshot shows the output of the program when executed. The user is prompted to guess a number from 0 to 100. The program generates a random number and compares it with the user's input. The output is as follows:

```
/n Guess a number from (0 to 100): 27
youve entered a number greater than the random generated number... C'MON YOURE GETTING CLOSE/n Guess a number from (0 to 100): 67
youve entered a number greater than the random generated number... C'MON YOURE GETTING CLOSE/n Guess a number from (0 to 100): 939
youve entered a number greater thn the reandom generated number...TRY AGAIN!./n Guess a number from (0 to 100): 98
youve entered a number greater thn the reandom generated number...TRY AGAIN!./n Guess a number from (0 to 100): 09
youve entered a number greater than the random generated number... C'MON YOURE GETTING CLOSE/n Guess a number from (0 to 100): 7
youve entered a number greater than the random generated number... C'MON YOURE GETTING CLOSE/n Guess a number from (0 to 100): 90
youve entered a number greater than the random generated number... C'MON YOURE GETTING CLOSE/n### number of attempts has been reached, BETTER LUCK NEXT TIME MY G
Process returned 0 (0x0)   execution time : 22.123 s
Press any key to continue.
```