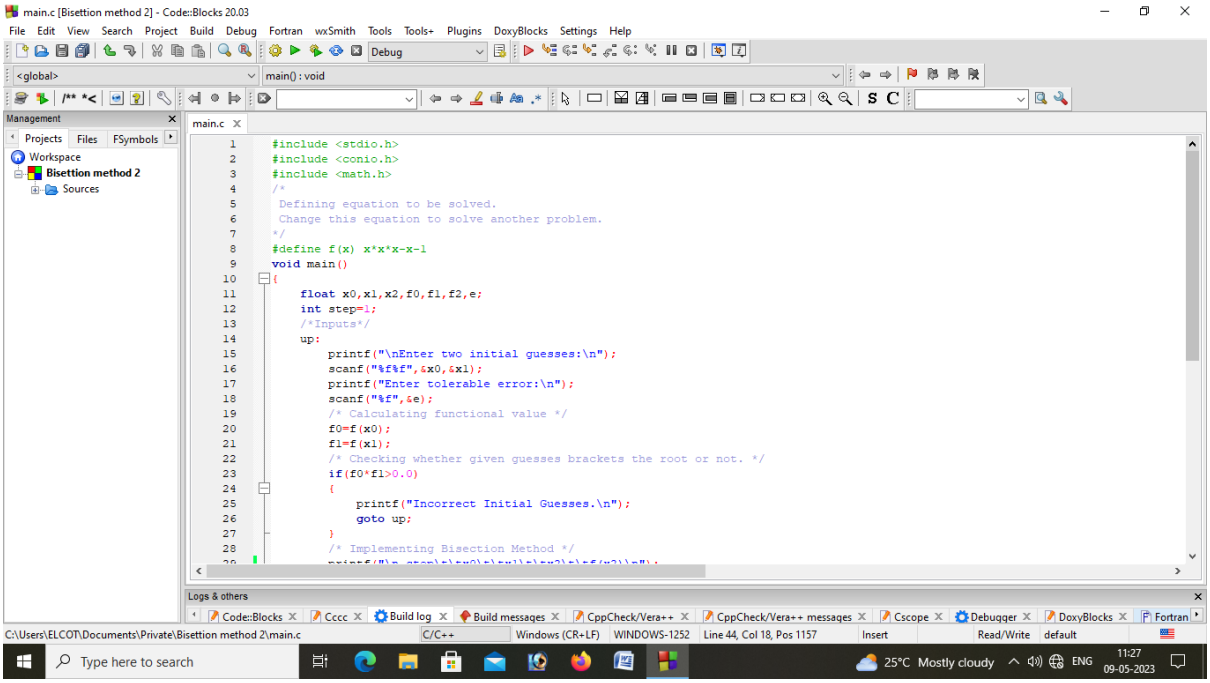
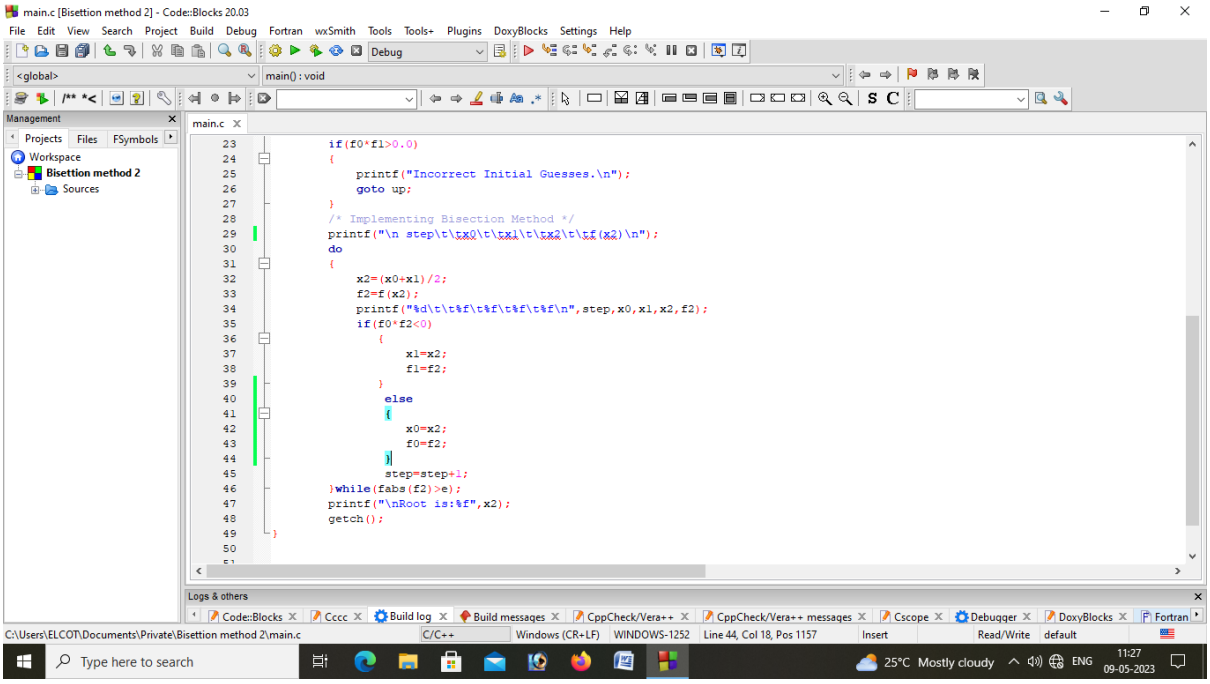

main.c [Bisection method 2] - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Debug
<global>
main() : void
Management
Projects Files FSymbols
Workspace
Bisection method 2
Sources
main.c
#include <stdio.h>
#include <conio.h>
#include <math.h>
/*
Defining equation to be solved.
Change this equation to solve another problem.
*/
#define f(x) x*x*x-x-1
void main()
{
float x0,x1,x2,f0,f1,f2,e;
int step=1;
/*Inputs*/
up:
printf("\nEnter two initial guesses:\n");
scanf("%f%f",&x0,&x1);
printf("Enter tolerable error:\n");
scanf("%f",&e);
/* Calculating functional value */
f0=f(x0);
f1=f(x1);
/* Checking whether given guesses brackets the root or not. */
if(f0*f1>0.0)
{
printf("Incorrect Initial Guesses.\n");
goto up;
}
/* Implementing Bisection Method */
Logs & others
Code::Blocks Cccc Build log Build messages CppCheck/Vera++ CppCheck/Vera++ messages Cscope Debugger DoxyBlocks Fortran
C:\Users\ELCOT\Documents\Private\Bisection method 2\main.c
C/C++ Windows (CR+LF) WINDOWS-1252 Line 44, Col 18, Pos 1157 Insert Read/Write default
Type here to search
25°C Mostly cloudy
ENG
11:27
09-05-2023


main.c [Bisection method 2] - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Debug
<global>
main() : void
Management
Projects Files FSymbols
Workspace
Bisection method 2
Sources
main.c
23 if(f0*f1>0.0)
24 {
25 printf("Incorrect Initial Guesses.\n");
26 goto up;
27 }
28 /* Implementing Bisection Method */
29 printf("\n step\t\tx0\t\tx1\t\tx2\t\tf(x2)\n");
30 do
31 {
32 x2=(x0+x1)/2;
33 f2=f(x2);
34 printf("%d\t\t%f\t%f\t%f\t%f\n",step,x0,x1,x2,f2);
35 if(f0*f2<0)
36 {
37 x1=x2;
38 f1=f2;
39 }
40 else
41 {
42 x0=x2;
43 f0=f2;
44 }
45 step=step+1;
46 }while(fabs(f2)>e);
47 printf("\nRoot is:%f",x2);
48 getch();
49 }
Logs & others
Code::Blocks Cccc Build log Build messages CppCheck/Vera++ CppCheck/Vera++ messages Cscope Debugger DoxyBlocks Fortran
C:\Users\ELCOT\Documents\Private\Bisection method 2\main.c
C/C++ Windows (CR+LF) WINDOWS-1252 Line 44, Col 18, Pos 1157 Insert Read/Write default
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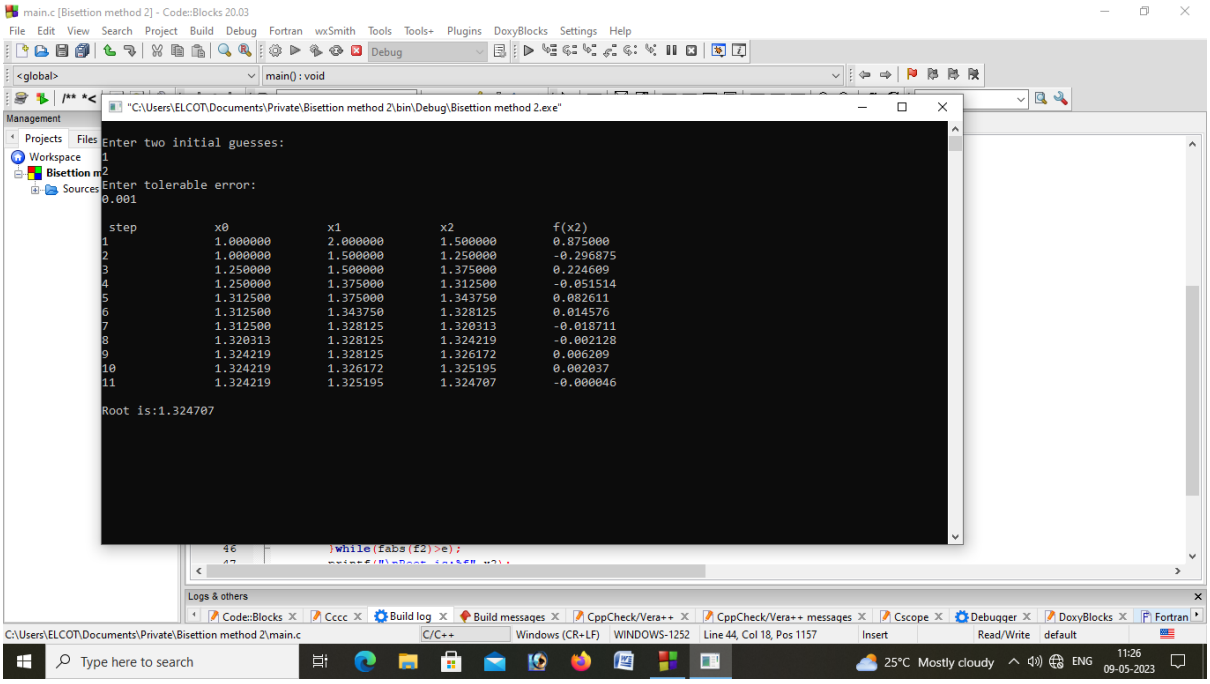
"C:\Users\ELCOT\Documents\Private\Bisection method 2\bin\Debug\Bisection method 2.exe"
Enter two initial guesses:
1
2
Enter tolerable error:
0.001
step x0 x1 x2 f(x2)
1 1.000000 2.000000 1.500000 0.875000
2 1.000000 1.500000 1.250000 -0.296875
3 1.250000 1.500000 1.375000 0.224609
4 1.250000 1.375000 1.312500 -0.051514
5 1.312500 1.375000 1.343750 0.082611
6 1.312500 1.343750 1.328125 0.014576
7 1.312500 1.328125 1.320313 -0.018711
8 1.320313 1.328125 1.324219 -0.002128
9 1.324219 1.328125 1.326172 0.006209
10 1.324219 1.326172 1.325195 0.002037
11 1.324219 1.325195 1.324707 -0.000046
Root is:1.324707