

Quadratic Root Finder Write Up

I think the design of my code was efficient for both debugging purposes and intended usage. Using an Enum to handle the different input cases made processing them significantly easier. I also put the section that accepts values from the user in a loop so I didn't have to run the program six times. Additionally, at program start, I created a function for demonstrations so I could test all of the various input combinations as I was working on them. This allowed me to fix the function that actually discovers the roots before I began accepting user input. One of the difficulties I came across stemmed from my usage of the object class in my function to find roots. Since my main is wrapped in a try catch statement, I knew anyone inputting string values instead of double/int values would be caught. However, I wanted to catch the error inside of my findRoots function. I made the class of the function arguments objects so I could call toString and attempt to call parseDouble on them, where the error would be caught and the user could be informed.

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C:\Code\COMP220> cd c:\Code\COMP220 && cmd /c "C:\Program Files (x86)\Java\jdk-18.0.1\bin\java.exe" --enable-preview -XX:+showCodeDetailsInExceptionMessages -cp c:\Users\scott\AppData\Roaming\Code\User\workspaceStorage\0e1efa1b61955bec5ec25ea8fecf837d\redhat.java\jdt_ws\COMP220_6edc3d37\bin Week1.QuadraticSolver "
Demonstration or Actual Uses? (0,1)
1
Please submit a value for a
2
Please submit a value for b
4
Please submit a value for c
1
Your inputs were 2 4 1
Your answers are -0.2928932188134524 and -1.7071067811865475
Please submit a value for a
1
Please submit a value for b
2
Please submit a value for c
1
Your inputs were 1 2 1
Your answer is -1.0
Please submit a value for a
5
Please submit a value for b
1
Please submit a value for c
1
Your inputs were 5 1 1
The answer is: -1.0/10.0 ± i*sqrt(19.0)/10.0
Please submit a value for a
0
Please submit a value for b
1
Please submit a value for c
0
Your inputs were 0 1 0
The answer is: -0.0
Please submit a value for a
0
Please submit a value for b
0
Please submit a value for c
0
Your inputs were 0 0 0
Your inputs produced a linear equation parallel to the x-axis which cannot intersect the x-axis by definition.
Please submit a value for a
x
Please submit a value for b
y
Please submit a value for c
z
Your inputs were x y z
One or more of your inputs were invalid. Your inputs: x y z
Error Message: For input string: "x"
Please submit a value for a
|
```