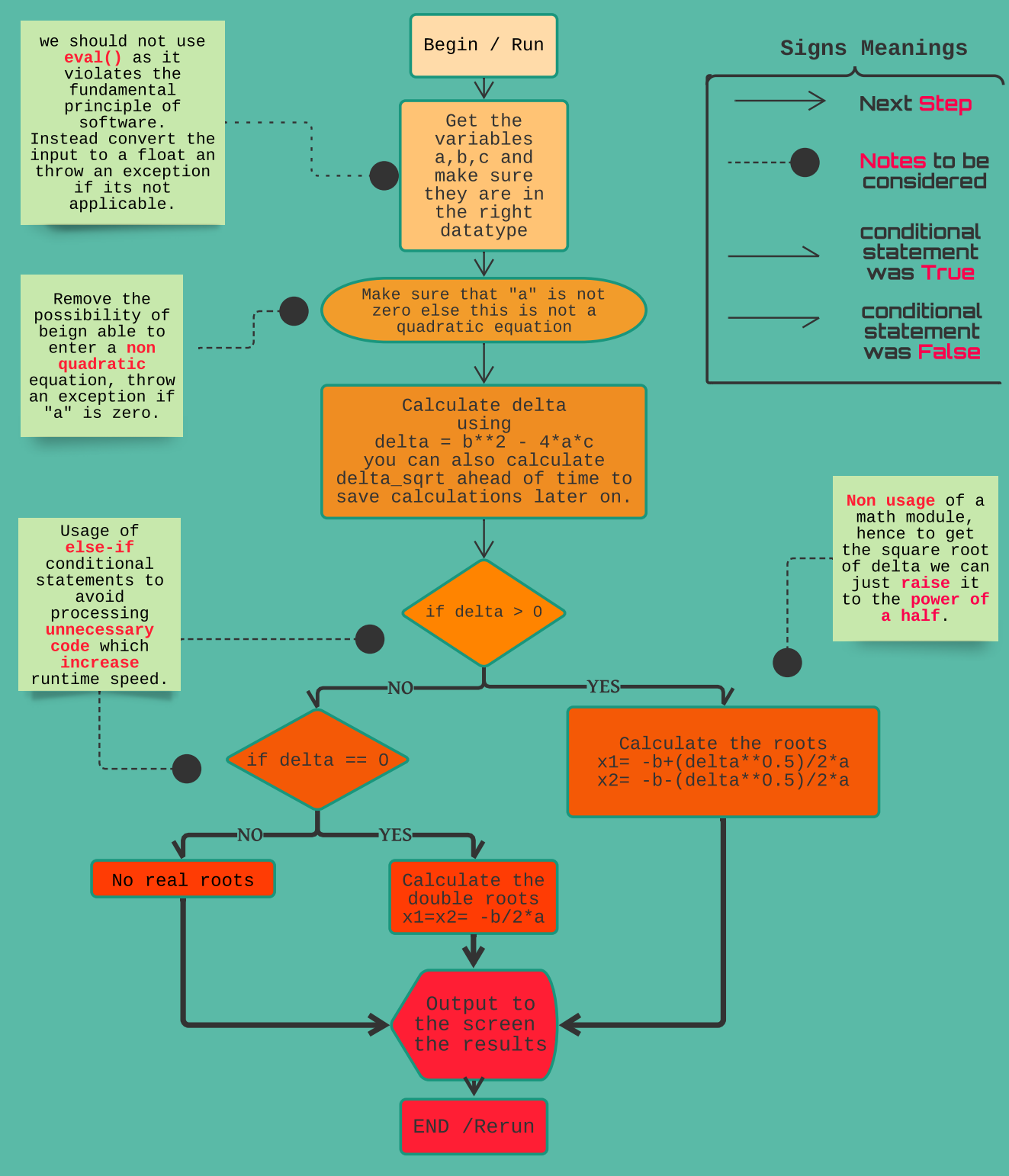
we should not use eval() as it violates the fundamental principle of software. Instead convert the input to a float an throw an exception if its not applicable.
Begin / Run
Get the variables a,b,c and make sure they are in the right datatype
Signs Meanings
Next Step
Notes to be considered
conditional statement was True
conditional statement was False
Remove the possibility of beign able to enter a non quadratic equation, throw an exception if "a" is zero.
Make sure that "a" is not zero else this is not a quadratic equation
Calculate delta using delta = b**2 - 4*a*c you can also calculate delta_sqrt ahead of time to save calculations later on.
Usage of else-if conditional statements to avoid processing unnecessary code which increase runtime speed.
if delta > 0
Non usage of a math module, hence to get the square root of delta we can just raise it to the power of a half.
NO
YES
if delta == 0
Calculate the roots x1= -b+(delta**0.5)/2*a x2= -b-(delta**0.5)/2*a
NO
YES
No real roots
Calculate the double roots x1=x2= -b/2*a
Output to the screen the results
END /Rerun