

## Problem

During the process of the solution program, I had encounter three main problems. First, how to use discriminant to determine different value and different format of the roots. Second, how to use different variable condition to print the pretty printing format. Finally, how to print Imaginary number and how to print I sign after the value of the roots.

## How I develop my program solution

First, I write the first two sentence "solving root of equation  $a*x**2+b*x+c=0$ " and "please enter three integer coefficients a, b and c:" just like how the example goes. Then, I write a scanf to scan the three integer into a, b and c. Third, I write a if loop to make sure the function is a quadratic function. Fourth, I use discriminant to determine different value of root\_1 and root\_2 and also select the different condition of print the sentence "The real root of the equation" or "The multiple real roots of the equation:" or "The complex roots of the equation:". Fifth, use a different if loop to make sure my program print pretty printing format every times in different condition. Sixth, print the different roots when discriminant is positive or negative or equal 0 and also print the I sign when the roots include Imaginary number. Finally, print error if the function isn't quadratic function.