Write a Java program to solve a sequence of quadratic equations of the form:

\[ ax^2 + bx + c = 0 \]

following requirements of Assignment #2, with the following additional requirements:

6) This is a modified requirement #3. The method named `readCoeff()`, called once per coefficient, shall read the equation coefficients from the keyboard, prompting the operator as follows:

Please enter coefficient a: <operator enters a>
Please enter coefficient b: <operator enters b>
Please enter coefficient c: <operator enters c>

The method shall read only one value in a single call, taking parameters, if necessary, and returning the value of the read coefficient to be stored in a `double` variable.

7) The program shall handle a situation when coefficient \( a \)=0; how to handle it is up to the programmer.

8) The program shall handle exceptions in data entry, that is, when a non-number is entered from the command line or a non-number is entered in response to the program’s prompt.

9) Calculation of roots shall be done by a separate method, named `calcRoots()`, perhaps running twice, once for calculation of a single root.

10) Calculation of the discriminant \((b^2 - 4ac)\), shall be done via a method named `discr()`, taking coefficients \( a, b, \) and \( c \) as `double` parameters, and returning the discriminant’s value.

11) This is a modification of requirement $4$. Method `outResults()` shall write to a file only, if the roots exist, and to the screen only, if there are no roots.

12) The program shall be structured in a way that the main calls all three methods in sequence: `readCoeff()` first, then `calcRoots()`, and finally `outResults()`.

Note. If there is a contradiction between requirements of Assignment #3 and the previous assignment, those of Assignment #3 take precedence.