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Assignment 2- OOP

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Description of the components that involved in the system :

Scalar-
an abstract class, with two implementations, so that each implementation is responsible for the following actions- Add, Multiply, Increase Strength, Return Negative Value, and Equalize Test and Value in string.
Of course, any action relative to a given object- most of the time that also Scalar.

RationalScalar- the first Scalar's implementation for Rational numbers.

RealScalar- the second Scalar's implementation for Real numbers

PolyTerm-
A class with 2 values. The first is a scalar value that expresses the coefficient and the second an int value expressing the evaluator.
This class also has the ability to carry out the operations of the Scalar class. In addition, it has the option to return a derivative.
But this time the actions are usually done in relation to a different PolyTerm, rather than to Scaler.

Polynomial-

This class keeps a number of different PolyTerm on list. and it responsible for carrying out the same actions as the PolyTerm but between two different Polynomials. i.e.- for all the PolyTerm in the list and not for only one PolyTerm.

Calculator-

This class is responsible for the general operation of all the class's and for contact with the user.

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UML Diagram