Polinomial Processing

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# Assignment objective

Propose, design and implement a system for polynomial processing. Consider the polynomials of one variable and integer coefficients.

Secondary Objectives:

* Design a monomial class that consists of a grade and coefficient
* Create the polynomial class, as a list of more monomials
* Divide the operations into mono and binary operations and create interfaces for each type
* Create a class that implements said operations for addition, subtraction, multiplication, integration and derivation
* Create the division operation without implementing the interface since its output is the only one that is divided into 2 polynomials, the quotient and the reminder
* Create the graphical user interface
* Use the regex library to deconstruct the string input into polynomials
* Override the toString method for the polynomials in order to make the representation readable

# Assignment analysis, assumptions, use-cases, errors

The polynomial processor must be capable to extract the monomials from a string and then execute any of the six operations (addition, multiplication, subtraction, division, derivation, integration) to one or both depending on the chosen operation. Errors may occur if the given polynomials don’t respect the given