

Quality of Development – TP13

The objective of this work is to implement version 2 and version 3 of the expression evaluator developed in TP12, and then assess the benefits of using the Factory pattern for the necessary modifications to implement these version changes.

Reminders: In version 2 of the evaluator, expressions are expanded to include binary integer expressions - and / (see TP9, expression syntax version 2). In version 3, expressions are further extended to include logical expressions (see TP9, expression syntax version 3).

Work to be carried out

1. Transition to Version 2

- 1.1) Modify the class diagram from TP12 in order to handle binary integer expressions - and /.
- 1.2) Modify the code accordingly and note the benefits of the Factory pattern, which reduces the modifications needed to transition to version 2. Test the correct functioning of the application.

2. Transition to Version 3

- 1.3) By reusing the expression hierarchy defined in TP10, modify the class diagram from version 2 in order to handle logical expressions.
- 1.4) Adjust the code accordingly and test its correct functioning.

3. Assessment

Compare the development without the Factory pattern (TP8 to TP11) with the development using Factory regarding the modifications made for version changes in the evaluator. Note the improvement in development quality thanks to the application of the Factory pattern.