

Expression

a first definition for later extension

Expression

```
int nrStudents = 13
```

13 is an expression

Expression

```
int nrStudents = 13 + 12
```

13 + 12 is an expression

Expression

```
int nrStudents = 13 + 12 - 7
```

13 + 12 - 7 is an expression

Expression

“An expression in a programming language is a combination of explicit values, constants, variables, operators, and functions that are interpreted according to the particular rules of precedence and of association for a particular programming language, which computes and then produces (returns, in a stateful environment) another value. “

[https://en.wikipedia.org/wiki/Expression_\(computer_science\)](https://en.wikipedia.org/wiki/Expression_(computer_science))

Expression lite

Let's shorten it a bit

Expression lite

“An expression in a programming language is a combination of explicit values, ..., variables, operators“

[https://en.wikipedia.org/wiki/Expression_\(computer_science\)](https://en.wikipedia.org/wiki/Expression_(computer_science))

Expression lite

A combination of

values

variables

operators

Some syntax rules apply, but let's not get too theoretical

Expression lite

A combination of

values	12, 18, -121212
variables	nrStudents, age
operators	+ - / *

Some syntax rules apply, but let's not get too theoretical

Expression

expr = literal (e.g 3, 4, 5, -1000)

or

literal operator literal

.... but since literal is an expression we can write this as.

Expression

expr = literal

e.g 3, 4, 5, -1000

Expression

expr = literal (e.g 3, 4, 5, -1000)

or

expr operator expr (e.g 3+4 - 12)

Expression

expr = literal (e.g 3, 4, 5, -1000)

or

expr operator expr

e.g 3+4-12

Expression

expr operator expr

3+4 - 12 is one expression, where

3 + 4 is one expression

12 is one expression

3+4 is possible to calculate

12 is quite easy to calculate :)

Expression

There's more to an expression, as you've seen in the first pages, but for now it is enough.

We will extend the expression definition along the course.