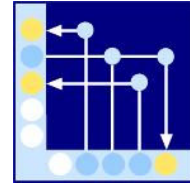




Hochschule Aalen

*Fakultät Elektronik und Informatik
Studienbereich Informatik*



Advanced Programming with MOSTflexiPL

Lecture in Wintersemester 2025/2026

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1. Task Sheet (October 21, 2025)

Aufgabe 1: Logical Operators

Define the usual logical operators for `bool` values `x` and `y` as follows:

- Negation: `/ x` returns `true` if `x` is equal to `false`.
- Conjunction: `x /\ y` returns `true`, if `x` and `y` are both different from `false`.
(Caveat: In principle, there might be synthetic `bool` values other than `true`, which are also different from `false`.)
- Disjunction: `x \/ y` returns `true`, if at least one of the values `x` and `y` is different from `false`.

Otherwise, `false` is returned in each case.

Use direct exclusions to specify:

- Negation binds stronger than conjunction.
- Conjunction binds stronger than disjunction.
- Conjunction and disjunction are each left-associative.

Aufgabe 2: Comparison Operators

Define the usual comparison operators for integral numbers, i. e., for `int` values `x` and `y`:

- `x /= y` returns `true`, if `x = y` returns `false`.
- `x < y` returns `true`, if `x` and `y` are both natural values and the value of `x` is less than the value of `y`.
- `x <= y` returns `true`, if `x < y` or `x = y` returns `true`.

Otherwise, `false` is returned in each case.

- `x > y` is equivalent to `y < x`.
- `x >= y` is equivalent to `y <= x`.