

Translation rules

Here are a few exercises for understanding translation rules from Java to Why.

1. Here is a proposal for a simple rule for translating field incrementation:

$$\llbracket e.f ++ \rrbracket = \llbracket e.f = e.f + 1 \rrbracket$$

Show why it is not correct, and propose a correct translation rule.

2. Propose a translation rule for the `for` loop:

`for (e1 ; e2 ; e3) s`

3. Propose translation rules for `break` and `continue` with labels, and modify translation rule of the `while` loop accordingly.
4. Propose translation rules for the `switch` statement.