
Essentials of Programming Languages

<http://proglang.informatik.uni-freiburg.de/teaching/konzepte/2015/>

Exercise Sheet 9

9.1 Mutable Records

Add mutable records to your language.

$$e ::= \dots \mid \mathbf{new} \mid e.x \mid e.x := e$$

To implement mutable records you need to specify a program heap and references. The expression `new` should create a new empty record in the heap and it should return a reference to the record. Expression `e.x` first evaluates `e` to a value. If it is a reference to a record, `e.x` returns the value of the field `x` in the record. Similarly, `e.x := e` assigns a new value to the record field `x` in the record represented by the first subexpression.

Submission

Deadline The submission deadline is **03.07.2015, 12:00 (noon)**. Late submissions will not be accepted. Submit your solution to the subversion repository.

Submission Your solution will consist of one *folder* (**exercise9**) for each exercise sheet. Submit one *pdf* file (`(<name>_exercise9_<nr>.pdf)`) and one *rkt* file (`(<name>_exercise9_<nr>.rkt)`) per exercise.

Your solution may be either in German or in English. Clear and understandable style is required. You are strongly encouraged to test your solution. Your code must compile without errors (which did not necessarily mean that everything has to work). Provide your source code with comments to understand the intention.