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## Essentials of Programming Languages

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

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### Exercise Sheet 6

#### 6.1 Type Checker

The goal of this exercise is to write a type checker for the mini language from the last exercise. In this language, every variable must be explicitly typed when introduced as typed variable. The abstract syntax looks as follows:

$$e ::= \dots \mid \lambda x : \tau . e \mid e (e)$$
$$\tau ::= \mathbf{Int} \mid \mathbf{Bool} \mid \tau \rightarrow \tau$$

where  $e$  are expressions and  $\tau$  are types.

#### Submission

**Deadline** The submission deadline is **12.06.2015, 12:00 (noon)**. Late submissions will not be accepted. Submit your solution to the subversion repository.

**Submission** Your solution will consist of one *folder* (**exercise6**) for each exercise sheet. Submit one *pdf* file (**<name>\_exercise6\_<nr>.pdf**) and one *rkt* file (**<name>\_exercise6\_<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.