## **Concepts of Programming Languages**

http://proglang.informatik.uni-freiburg.de/teaching/konzepte/2009ss/

## **Exercise Sheet 11**

2009-07-09

## Exercise 1 (4 points)

Write a module that implements arithmetic using a representation in which the integer k is represented as 5 \* k + 3. Your module should have to following interface:

```
[type definition for t
zero : t
succ : (t -> t)
pred : (t -> t)
is-zero : (t -> bool)
]
```

The component type definition for t is either a transparent or opaque type component of name t.

## **Submission**

On paper (please don't send me emails). The strict submission deadline is **2009-07-16**, **3 pm** (before the exercise session).