

January 18, 2010

Programming Languages and Types

Group Exercise 11

G11.1 Type Inference

Apply the type inference algorithm from the lecture to the following terms.

1. $\lambda f. \lambda x. f\ x$
2. $\lambda x. \text{let } f = \lambda x. x \text{ in } (f\ f)\ x$
3. $\lambda x. x\ x$

G11.2 System F vs. Let Polymorphism

Can $\lambda x. x\ x$ be typed in System F?

Whats the advantage of System F over Let Polymorphism?

Whats the advantage of Let Polymorphism over System F?