

Type Inference

Exercise 1

Infer the type of the expressions:

`x => if (x > 0) x else -x`

`x => if (x) 1 else x`

`x => if (x) (y => 0) else (y => y)`

`x => y => x(y) && y(0)`

Exercise 2

Infer the generalized type of the following function definitions:

`def S(x, y, z) = (x(z))(y(z))`

`def cm(f, g) = x => f(g(x))`

`def cr(f) = x => (y => f(x,y))`

`def uncr(f) = p => (f(p._1))(p._2)`

`def pr(x, y) = c => (c(x))(y)`

`def c1(p) = p(x => (y => x))`

`def c2(p) = p(x => (y => y))`

`def e(x, y) = c1(pr(x,y))`

`def Sb(x, y, z) = (x(z))(z(x))`