Advanced Programming Languages (COP 4930/CIS 6930) [Spring 2015]

Assignment III

Due Date: Monday 2/16/15 at 5pm

Assignment Description

Do the following by yourself (please don't discuss solutions until after the due date).

1. Write an essay, no more than one page in length, explaining the key ideas of the Curry-Howard Isomorphism. You may want to read Philip Wadler's wonderful papers on the topic:
http://homepages.inf.ed.ac.uk/wadler/papers/frege/frege.pdf
http://homepages.inf.ed.ac.uk/wadler/papers/propositions-as-types/propositions-as-types.pdf

2. Suppose a call-by-value language X has exceptions, with the relevant constructs defined as in class. Show all the parts of X's type-safety proof that are specific to exceptions (including try-with expressions). You'll need to provide proofs for several cases of various lemmas. If new lemmas are needed, please state and prove them too. ☺