An untyped λ-calculus, *UL*

Principles of Programming Languages

Mark Armstrong

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1 Preamble

1.1 **TODO** Notable references

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1.2 **TODO** Table of contents

2 Introduction

In this section we construct our first simple programming language, an untyped λ-calculus (lambda calculus).

More specifically, we construct a λ-calculus without (static) type checking (enforcement), but including the natural numbers and booleans.

2.1 History

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2.2 Descendents of the λ-calculus

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3 The basics

:TODO:

4 The formal syntax and semantics of *UL*

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5 α-conversion, β-reduction and η-conversion

:TODO:

6 Topics of theoretical interest

6.1 The pure λ-calculus

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6.2 Nameless representation of terms

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