

PPL – Recitation Five

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Goals for this Recitation

Lots of Random Things

- ▶ Lambda Calculus

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- ▶ Lambda Calculus
 - ▶ The Why

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- ▶ Lambda Calc – boolean operators
- ▶ Let's get scheming
- ▶ why do I do this...

Lambda Calc

The Why...

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The Why...

- ▶ Lambda calc is to functional language as _____ are to imperative languages
- ▶ Have to approach it as the foundational backing
- ▶ The biggest motivation here is that functional languages are just not the same

Let's do this

- ▶ So...I know we were mean to the alligators last time but
- ▶ I talked to Jeff, understand the example, we are going to go through it

Lambda Booleans

Facts of Life

- ▶ $\lambda x. \lambda y. x \equiv \text{true}$ (pick first)
- ▶ $\lambda x. \lambda y. y \equiv \text{false}$ (pick second)

Operators

- ▶ If we want to simulate not...

Let's get scheme-ing

I hate myself

- ▶ Everywhere you look, parenthesis
- ▶ Most operations are done in scheme through lists
- ▶ Do you like recursion? haha it doesn't matter bc you will need to :)

Some fundamentals

- ▶ car
- ▶ cdr
- ▶ cons