

Dependent Types and Theorem Proving: Introduction to Dependent Types

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March 2021

- 1 Intro: greetings, prerequisites, learning outcomes, plan of lectures, F*
- 2 First-class types
 - What does “first-class” mean?
 - Computing types by recursion
- 3 Dependent functions
 - Type-safe printf
 - How to express polymorphism
 - Implicit arguments and how to read function signatures
- 4 Dependent pairs
- 5 Generalized algebraic data types
 - Example: length-indexed lists
 - Example: enforcing protocols
- 6 Refinement types
- 7 Exercises

