

Foundations - type theory

November 2, 2025

Contents

1 Deductive system	1
1.1 Contexts	1

1 Deductive system

1.1 Contexts

Definition 0.1. We will note \cdot for the empty context

Axiom 0.1. empty derivation : $rule_empty_derivation : \epsilon \text{ --- } empty_context ctx$

Axiom 0.2. context extension : $rule_context_extension : \Gamma \vdash A : \mathcal{U}_i, x \text{ not in } dom(\Gamma) \text{ --- } \Gamma, x : A ctx$

Axiom 0.3. variable rule : $rule_variable : \Gamma ctx, x : A \text{ in } \Gamma \text{ --- } \Gamma \vdash x : A$