False$\Gamma \vdash \texttt{false} : \texttt{Bool}$

- Value terms
- - Var x
  - lambda $\lambda x : A.C$
  - const $\texttt{C}^A$
  - unit $\texttt{()}$
  - true $\texttt{true}$
  - false $\texttt{false}$
- Computation terms
- - If $\texttt{if}_{\epsilon,A} v \texttt{then} C_1 \texttt{else} C_2$
  - Application $V_1 V_2$
  - Do $\texttt{do} x \leftarrow C_1 \texttt{in} C_2$
  - return $\texttt{return} V$
- Type System
- (Const) $\frac{}{\Gamma \vdash \texttt{C}^A : A}$
- (Unit) $\frac{}{\Gamma \vdash \texttt{()} : \texttt{Unit}}$
- (True) $\frac{}{\Gamma \vdash \texttt{true} : \texttt{Bool}}$
- () (Var) $\frac{}{\Gamma, x : A \vdash X : A}$
- (Weaken) $\frac{\Gamma \vdash x : A}{\Gamma, y : B \vdash X : A}$ (if $x \neq y$)
- (Fn) $\frac{\Gamma, x : A \vdash C : \texttt{M}_\epsilon B}{\Gamma \vdash \lambda x : A.C : A \to \texttt{M}_\epsilon B}$
- (Sub) $\frac{\Gamma \vdash v : A \quad A <: B}{\Gamma \vdash v : B}$
- (Return) $\frac{\Gamma \vdash v : A}{\Gamma \vdash \texttt{return} v : \texttt{M}_1 A}$
- (Apply) $\frac{\Gamma \vdash v_1 : A \to \texttt{M}_\epsilon B \quad \Gamma \vdash v_2 : A}{\Gamma \vdash v_1 v_2 : \texttt{M}_\epsilon B}$
- (if) $\frac{\Gamma \vdash v : \texttt{Bool} \quad \Gamma \vdash C_1 : \texttt{M}_\epsilon A \quad \Gamma \vdash C_2 : \texttt{M}_\epsilon A}{\Gamma \vdash \texttt{if}_{\epsilon,A} V \texttt{then} C_1 \texttt{else} C_2 : \texttt{M}_\epsilon A}$
- (Do) $\frac{\Gamma \vdash C_1 : \texttt{M}_{\epsilon_1} A \quad \Gamma, x : A \vdash C_2 : \texttt{M}_{\epsilon_2} B}{\Gamma \vdash \texttt{do} x \leftarrow C_1 \texttt{in} C_2 : \texttt{M}_{\epsilon_1 \cdot \epsilon_2} B}$
- (Subeffect) $\frac{\Gamma \vdash C : \texttt{M}_{\epsilon_1} A \quad A <: B \quad \epsilon_1 \leq \epsilon_2}{\Gamma \vdash C : \texttt{M}_{\epsilon_2} B}$