Hazel Assistant Calculus WIP

Andrew Blinn
University of Michigan, USA
blinnand@umich.edu

Cyrus Omar
University of Michigan, USA
comar@umich.edu

Abstract

The hazelnut assistant calculus provides an extensible framework for type- and value-directed completion and refactoring support in a structured editing context.

CCS Concepts: • **Software and its engineering → General programming languages**.

Keywords: live programming, code completion, refactoring, GUIs

ACM Reference Format:
Andrew Blinn and Cyrus Omar. 2021. Hazel Assistant Calculus WIP. In *Proceedings of ACM Conference (Conference'17).* ACM, New York, NY, USA, 1 page. https://doi.org/10.1145/nnnnnnn.nnnnnnn

wazzzzzaaaaaaaaaaaaaaaaaaaaap

1 Assistant Calculus

blah blah blah types

$$\texttt{Suggest Hole Synthetic}\ \frac{\mathsf{Intros}(\tau)s}{\Gamma \vdash\!> \text{⟪} <\!\Leftarrow \tau \hookrightarrow \mathrm{A}_{intros} \cup \mathrm{A}_{elims}}$$

$$\texttt{ELam}\ \frac{\Phi; \Gamma, x : \tau_{\text{in}} \vdash \hat{e} \rightsquigarrow e : \tau_{\text{out}}}{\Phi; \Gamma \vdash \lambda x.\hat{e} \rightsquigarrow \lambda x.e : \tau_{\text{in}} \rightarrow \tau_{\text{out}}}\ \cdots$$

$$\texttt{EApLivelit}\ \frac{\begin{array}{c}\mathsf{livelit}\ \$a\ \mathsf{at}\ \tau_{\text{expand}}\ \{\tau_{\text{model}}; d_{\text{expand}}\} \in \Phi \\ \vdash d_{\text{model}} : \tau_{\text{model}} \\ d_{\text{expand}}\ d_{\text{model}} \Downarrow d_{\text{encoded}} \qquad d_{\text{encoded}} \uparrow e_{\text{pexpansion}} \\ \vdash e_{\text{pexpansion}} : \{\tau_i\}_{i<n} \rightarrow \tau_{\text{expand}} \\ \{\Phi; \Gamma \vdash \hat{e}_i \rightsquigarrow e_i : \tau_i\}_{i<n}\end{array}}{\Phi; \Gamma \vdash \$a\langle d_{\text{model}}; \{\hat{e}_i : \tau_i\}_{i<n}\rangle^u \rightsquigarrow e_{\text{pexpansion}}\ \{e_i\}_{i<n} : \tau_{\text{expand}}}$$

Figure 1. Expansion

References

Conference'17, July 2017, Washington, DC, USA

ACM ISBN 978-x-xxxx-xxxx-x/YY/MM…$15.00
https://doi.org/10.1145/nnnnnnn.nnnnnnn