

FooBarBaz: Generating Feedback on Variables for Thousands of Programming Students

Elena L. Glassman
MIT CSAIL
elg@mit.edu

Robert C. Miller
MIT CSAIL
rcm@mit.edu

ABSTRACT

In this paper we describe the formatting requirements for SIGCHI Conference Proceedings, and this sample file offers recommendations on writing for the worldwide SIGCHI readership. Please review this document even if you have submitted to SIGCHI conferences before, some format details have changed relative to previous years.

Author Keywords

learner-sourcing; computer science education; software engineering

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g., HCI): Miscellaneous

INTRODUCTION

Poor variable naming can make code hard to read. Individuals, companies, and entire programming communities develop specific naming conventions to clarify what constitutes good practice. Introductory programming and software engineering classes can rigorously test the functionality of students' code, but there are no tools available for teachers to view students' variable names and give constructive feedback at the scale of a large residential class or MOOC.

We present FooBarBaz, a system that

6.0001

Paper outline and contributions

RELATED WORK

Variable naming conventions (variety), variable naming conventions for Python (which is exclusively used here)

Powergrading english (basu), code (OverCode)... Over mechanisms for code feedback: Ceasar

FORMATIVE INTERVIEWS

Ana Bell, Finale (her own strict standards), Saman, Max (holy war?)

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ACKNOWLEDGMENTS

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REFERENCES

1. Adobe Acrobat Reader 7.
<http://www.adobe.com/products/acrobat/>.
2. Anderson, R. E. Social Impacts of Computing: Codes of Professional Ethics. *Social Science Computer Review* December 10, 4 (1992), 453–469.
3. How to Classify Works Using ACM’s Computing Classification System.
http://www.acm.org/class/how_to_use.html.
4. Klemmer, S. R., Thomsen, M., Phelps-Goodman, E., Lee, R., and Landay, J. A. Where do web sites come from?: capturing and interacting with design history. In *Proc. CHI 2002*, ACM Press (2002), 1–8.
5. Mather, B. D. Making up titles for conference papers. In *Ext. Abstracts CHI 2000*, ACM Press (2000), 1–2.
6. Schwartz, M. *Guidelines for Bias-Free Writing*. Indiana University Press, 1995.
7. Zellweger, P. T., Bouvin, N. O., Jehøj, H., and Mackinlay, J. D. Fluid annotations in an open world. In *Proc. Hypertext 2001*, ACM Press (2001), 9–18.