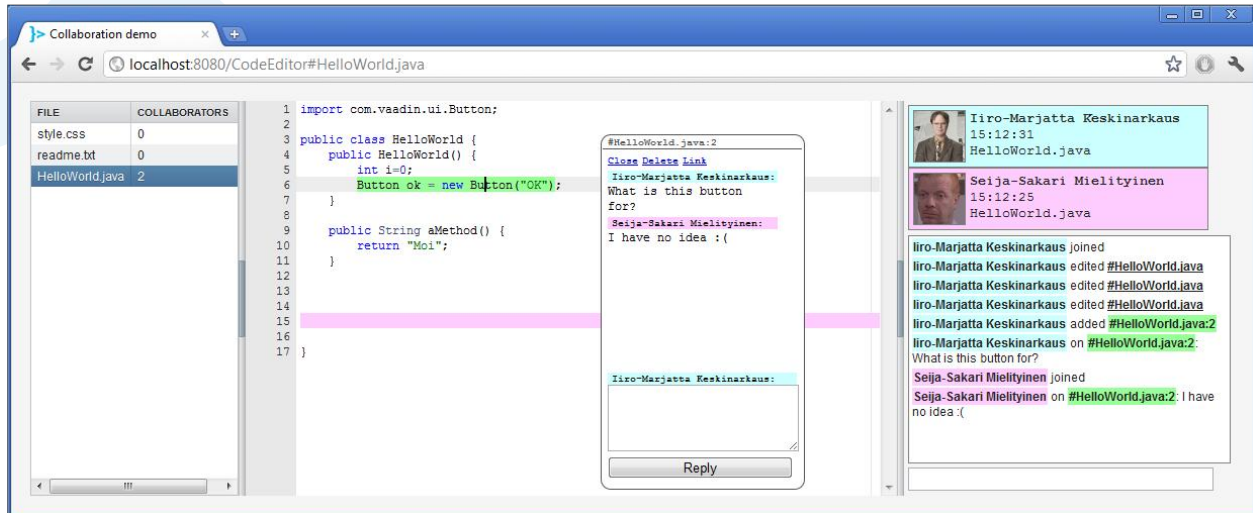


Towards Collaborative Code Editing: Case CoRED

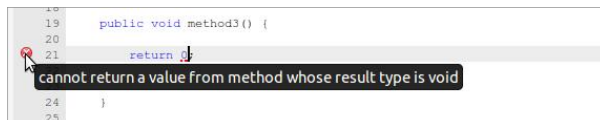
Janne Lautamäki, Antti Nieminen, Johannes Koskinen, Timo Aho, and Tommi Mikkonen
Tampere University of Technology, Finland

CoRED is a browser-based collaborative real-time code editor for Java applications. It contains highlighting, indentation, semantic error checking, code completions, collaborative editing and additional collaboration features inspired by social media.



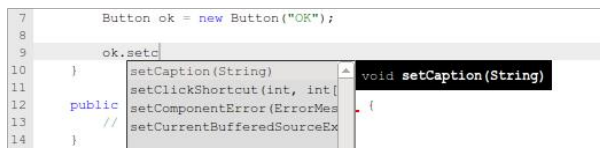
➤ Java Error Checking

The Java code is compiled on the server side using the Java Development kit (JDK). The errors and the diagnostic messages are presented to the user within the code.



➤ Automatic Code Completion

CoRED can give code suggestions, such as methods of an object before a typed dot. The suggestions are generated with the help of the JDK. Along with generic Java suggestions, it is possible to implement more domain-specific suggestions.



➤ Code Editing Aids

Ace editor [1] is used as a frontend component. It provides syntax highlighting and automatic indenting, among other code editing features.

➤ Facebook Connect

Supports Facebook user authentication. More features coming soon.

➤ Collaborative Editing

Implemented using Differential Synchronization. [2]

➤ Co-operation Features

Users can comment specific portions of the code. Other users can reply to the comments. In addition, it is possible to temporarily lock a portion of the code to be edited just by one person.

➤ Extendability

CoRED is implemented as a Vaadin [3] component. Its architecture allows for developing custom error checkers and code completion modules.

1. ACE – Ajax.org Cloud9 Editor. <http://ace.ajax.org/>
2. Fraser, N. Differential Synchronization. In *proceedings of the 2009 ACM Symposium on Document Engineering*, pp. 13–20.
3. Vaadin – thinking of U and I. <http://vaadin.com/>

- <http://jlautamaki.virtuallypreinstalled.com/CoRED>
- <http://www.youtube.com/user/TUTCoRED>
- Coming soon to: <http://vaadin.com/directory>
- For more information: antti.h.nieminen@tut.fi

