

An integrated development environment (IDE) for Distributed Software Engineering

PROJECT PLAN

Engineer project: An integrated development environment (IDE) for Distributed Software Engineering.

Project period : 28/12/2009-30/04/2010

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1. PROJECT DESCRIPTION

Overview

The basic idea of this project is to develop a useful web-based IDE that can be used by any client with a web browser. It will make programming become more easy and convenient, programmer can work outside of their office.

On the other hand, web-based IDE can help team members avoid conflict because every code and documents are stored on the servers. This will be a trend of the Distributed Software Engineering in the future.

Scope of the work

main features of the tool:

- Web-base
- Support writing and compiling Eiffel programs
- Support error report
- Optional part: a chat client for communication between members in one project.

Intended results

An web-based IDE for Eiffel programs.

2. BACKGROUND MATERIAL

Reading list

[1] Design and Code Reviews in the Age of the Internet , in Proceedings of SEAFOOD 2008 (Software Engineering Advances For Offshore and Outsourced Development, eds. K. Berkling, M. Joseph, M. Nordio and B. Meyer, Springer LNBI 16, 2009 [P24]. ([P130] is the journal version.)

[2] With Martin Nordio, Roman Mitin, Carlo Ghezzi, Elisabetta Di Nitto and Giordano Tamburelli: The Role of Contracts in Distributed Development, in Proceedings of SEAFOOD 2009 (Software Engineering Advances For Offshore and Outsourced Development), Zurich, June-July 2009, Lecture Notes in Business Information Processing 35, Springer Verlag, 2009 [P26].

[3] The Unspoken Revolution in Software Engineering Bertrand Meyer, 2006

3. PROJECT MANAGEMENT

Objectives and priorities

- The main objective is to develop a web-based IDE; the IDE should be able to edit and compile Eiffel programs.
- The IDE should also be able to report the compilation errors.
- Optional: The IDE should have a communication platform

Criteria for success

- Complete a Web-based IDE with text editor and can be compile Eiffel code
- Integrate with other component

Method of work

- Weekly meeting with supervisor is held using Skype to keep track of the process.
- The origo project <http://cloudstudio.origo.ethz.ch> will be used as development platform

Quality management

Documentation

- Project Plan
- Thesis report summarize results.

Validation steps

Continuous feedback from the supervisor will guide the development process.

4. PLAN WITH MILESTONES


Project steps

- Investigate about the technology for the web based IDE (2 weeks)
- Research technology and setup environment for development (1 week)
- Develop the basic IDE with an Editor (4 weeks)
- Integrate the IDE with EiffelStudio compiler (integrating the error report) (3 weeks)
- Develop the communication platform (3 weeks)
- Test the IDE (1 week)
- Write the thesis report (2-3 weeks)

Deadline

30/04/2010 (1-2 extra week for risk management)

Tentative schedule

		Task Name	Duration	Start	Finish	Predecessors
1		Investigate about the technology for the web based IDE	2 wks	Mon 12/28/09	Fri 1/8/10	
2		Research technology and setup environment for development	1 wk	Mon 1/11/10	Fri 1/15/10	1
3		Develop the basic IDE with an Editor	4 wks	Mon 1/18/10	Fri 2/12/10	2
4		Integrate the IDE with EiffelStudio compiler (integrating the error report)	3 wks	Mon 2/15/10	Fri 3/5/10	3
5		Develop the communication platform	3 wks	Mon 3/8/10	Fri 3/26/10	4
6		Test the IDE	1 wk	Mon 3/29/10	Fri 4/2/10	5
7		Write the thesis report	2 wks	Mon 4/5/10	Fri 4/16/10	6

REFERENCES

- [1] Chair of Software Engineering: *Semester-/Diplomarbeiten*; Online at: <http://se.inf.ethz.ch/projects/index.html>, consulted in October 2002.
- [2] Bertrand Meyer: *Object-Oriented Software Construction, 2nd edition*, Prentice Hall, 1997.