

HoGent

BEDRIJF
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ORGANISATIE

Stageverslag Bachelor toegepaste informatica Stage Open Webslides Web Development

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Internship report

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1 Preface

2 Project and framework

The internship will be held at IDLab (Internet Data Lab), a core research group of imec and Ghent University. Ruben Verborgh, professor Semantic Web technology at Ghent University and researcher within IDLab, is the original initiator of the project where the internship will take place. He proposed the idea for *open weblides*, using modern webtechnologies to create course material and enable students to interact more with the teacher and with each other. In 2016 the Open Weblides project won the UGent Innoversity Challenge by convincing the university of the project's vision on the future of education: open and web based.

Two years later and one year after the kickoff of the development on a co-creation platform for weblides, the project now counts people from many faculties within the UGent, multiple universities and even a wider international reach using an Erasmus+ project funded by the European Union.

I have chosen this project because of several reasons. First, I have already been working on the project as an active developer since February 2017. This allowed me to jump right into the project without any kind of learning curve or impediment. Second, since I am the main backend developer and have designed and implemented a large part of the backing logic, it is beneficial for the project to allow me to continue developing the platform. Finally, the project stays within the domain of interest I have set out for myself – Ruby on Rails and dynamic web applications.

My role in the project concerns more than just developing the backend software. It also reaches into the frontend stack, effectively making me a full-stack developer. In February 2018 the development team decided to reimplement a large part of the frontend stack, causing an imbalance between frontend and backend relating to workload.

3 Responsibilities and assignments

The current roadmap and milestones for the Open Weblides project are tailored to the two internship students working on the development. By the end of their internship (end of May 2018), the frontend part of the platform will have been reimplemented, providing a basic yet adequately functional interface for the Open Weblides platform. The main focus of this development phase is on the slides editor: a user should be able to create and modify topics, making use of all the interactive and semantic utilities the web has to offer.

Since I have been involved in the project since the beginning of the platform development, I am the main responsible person for defining the milestones, determining the product backlog and leading the development team on a day-to-day basis.

However, my primary role in the development team is backend developer. I am responsible for developing the backend server, implemented as a REST API server. Designing and maintaining the supporting server infrastructure is also one of my responsibilities. I also provide supporting frontend development, since the main workload of this development phase lies in the frontend stack.

Finally, I am also employed as technical administrator for the CoCOS Erasmus+ project. This project researches co-creation using open source tools, and Open Weblides is one of the tools it will use in the future. Supporting the project website and the interactive learning environment (Moodle) are examples of responsibilities concerning the CoCOS project. Keeping the Open Weblides project roadmap, milestones and expectations synced up with the intellectual outputs of the Erasmus+ project are important tasks as well.

4 Completed assignments

5 Personal reflection

6 Conclusion

Glossary

Appendices

A Internship journal

The internship journal was written after the end of every sprint, which usually consists of two weeks. The entries were submitted using the internship tool (<http://tinfb01.hogent.be/>).

Sprint 1

End of the first sprint. All backlog tasks included in this sprint were successfully completed.

- Setup of the frontend repository
- Mockups and wireframes of the application framework and editor
- Cleanup of old backend code
- Infrastructural support of the CoCOS-project

Sprint 2

End of second sprint. Finished backlog items:

- Refactoring of Decks (Topics) API
- Initial layout homepage
- Initial library layout
- Data model state validation

Ongoing tasks:

- Redesign of the CoCOS project site

Next sprint goal: Finishing a demo-able product for the CoCOS conference in Madrid. This includes:

- Rudimentary rendering of topic content as slides
- Editable content hierarchy
- Expand library pages

- Design Open Weblides branding

Planning for next week:

- Start coupling frontend and backend: data has to be retrieved from and be stored in the backend instead of local state
- Integrate authentication (signin/signup pages, REST API authentication and authorization)
- Start designing platform branding: the platform needs its own house style, colours, logo

Final sprint demo and meeting with the stakeholders and product owner was very productive. Feedback on mockups and the current application was provided and will be integrated in the next sprint (3 weeks instead of 2).

Sprint 3

End of third sprint (19/03 - 05/04). Finished backlog items:

- Redesign CoCOS project site
- Integrate Semantic UI LESS version

Ongoing tasks:

- Authentication pages in frontend
- API coupling frontend-backend

Next sprint goal:

- Editor interface (not necessarily coupled to backend)
- Platform branding, styling
- Working online demo
- Authentication (sign in, sign up) should also be working
- Slide rendering: very important as Anneleen is depending on the development of this feature to continue her master's dissertation

Final sprint demo and retrospective taught us that development is not going as fast as expected, however we should still be able to meet the milestone at the end of the internship: having a working content editor.

The past week I went to Madrid to meet up with the consortium of the CoCOS Erasmus+ project to discuss the further development and milestones up until February 2019. From now until summer the project is on track, but development efforts will have to continue in order to meet the deadlines in August and February.

Sprint 4

End of fourth sprint. Finished items:

- API coupling
- Demo instance
- Refactoring

Planning for next sprint (very short sprint due to holidays):

- Persistence of topics in backend
- Ongoing development of the editor

Sprint 5

End of fifth sprint. Finished items:

- Topics/ContentItems API coupling
- Refactoring, solving issues

Backlog for next sprint:

- Prepare for final sprint demo
- Ongoing development of the editor
- Fixing various issues

Sprint 6

B Reflection reports