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FenixEdu Team

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(Activity Report)

Abstract—This semester my independent studies activity consisted on a scholarship for integrating the FenixEdu development team on Direcção de Sístemas Informáticos (DSI). Several tasks and activities have been performed during the scholarship such as team work and cooperation with other collegues.

Index Terms—Independent Studies, Scholarship, DSI, FenixEdu, Software maintenance and development

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1 INTRODUCTION

THIS semester my activity was to make part of FenixEdu[1] team at DSI by means of a scholarship.

The FenixEdu project is a software for academic and administrative management of higher education institutions. The project is open-source[2], giving the opportunity for collaboration, distribution and adaptability for the needs of different institutions. It has started being developed developed at Instituto Superior Técnico (IST) in 2004 and has been adopted with success by other higher education institution since then. In this document i will start by approaching the Application process for the scholarship on Section 2, after that, a description of the interview is presented on Section 4. Section 5 details the main tasks performed during the scholarship and the integration within the project. A resume of the document is provided on Section 6 and a document proving the completion of the activity is attached on Figure 3.

2 APPLICATION FOR SCHOLARSHIP

The activity starts with the application process. I had the first contact with the project during

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  1. http://fenixedu.org/
  2. https://github.com/fenixedu

the classes at IST, since some of the processors had started and participated on the project, and they give examples of the activities, processes and software architecture that had been used there. I have also talked with some colleges of mine that work to get some insights and they told me it was easy to manage the time between work and school since they provide a flexible schedule. For me this is an important point since i still have to finish my master thesis.

All the feedback convinced me that it was a good place to work. I had already applied for a scholarship at DSI before but i was not accepted. However i thought it as a good time to apply again. I decided to improve my Curriculum Vitae (CV) and searched online for some information about how to build good CVs for technological related jobs. After that i rebuild my CV giving more information about my academic and professional experience, explaining the main projects developed and technologies used. After that i have submitted my application for the scholarship.

3 JOB INTERVIEW

After some time after the application for the scholarship, i have been contacted to schedule an interview. Since i had already been interviewed before and the people responsible were short on time, the interview was reasonably quick, but i tried to show my interest in the project by making some questions about the work environment and technologies used. We

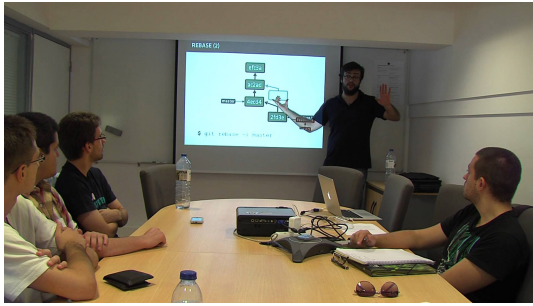|	ACTIVITY					DOCUMENT						
(1.0) Excelent	Objectives x2	Options x1	Execution x4	S+C x1	**SCORE**	Structure x0.25	Ortogr. x0.25	Gramm. x0,.25	Format x0.25	Title x0.5	Filename x0.5	**SCORE**
(0.8) Very Good												
(0.6) Good												
(0.4) Fair	1.8	1	3.6	0.6	7.0	0.25	0.2	0.2	0.23	0.5	0.5	1.88
(0.2) Weak												

Figure 1: Training Session

ended discussing some technical questions and how the project would evolve in the future. Some days after the interview, the results were published for eight scholarships to work at FenixEdu project and i was selected.

4 INITIAL ACTIVITIES

When the scholarship's results were published i went to DSI and it was told that i would get training about the project and technologies before starting to work. As several people would start working at the same time, they decided that the training would have a different format and we would all get training at the same time. The training was performed by other senior workers and it was about the main technologies used, the organization of code, work methodologies and main tools used. The training sessions were performed at the meeting room, an image of one of those training sessions can be seen on Figure 1. At the end of the last day of training we have done a guided tour around the spaced belonging to DSI, including offices and data-center. After that we made a dinner with most part of the people we would work in the future.

On the first days of work i installed the hardware and software necessary for my workstation and the first tasks were assigned. The first tasks were fairly easy and were mainly to correct bugs reported by users of the system. Even being easy tasks and after the training, those tasks required some adaptation since it was the first time i have been in contact with most of the tools and technologies that used at the project. It was possible to overcome this initial difficulties with the support of other workers and by reading documentation available online.

5 PROJECT INTEGRATION

After the initial activities several tasks have been assigned that were mostly related with code refactoring, extracting some functionalities to external projects, development of new features, maintenance of the system and correction of bugs submitted by the users. I have also developed documentation of the system functionalities and translation of existing documentation for English.

To maintain control about the tasks to be solved and task assignment, the team maintains a system that keeps track of bugs submitted by users or by the team and covers the normal communication between users and team members. Normally the tasks related with refactoring and correction of bugs were assigned using this system. Some times, the task or error description were not sufficiently descriptive to allow its resolution. In those cases it was required to communicate with the users using the task management system.

More complex tasks such as code refactoring or development of new features were normally assigned personally by other senior members as they usually require more information. On those cases the communication was done directly with the other members of the team.

At the beginning i have done several errors mostly related with Database (DB) scripts and the code integration tool (Git[3]). For example, one of the DB scripts could had led to inconsistency problems on the production system. Errors related with the code integration tool lead to disorganization on the system code. Most of the errors were detected by other team members before it got into production and corrected properly. As the time passed the number of errors have been further reduced and the independence for doing tasks without the help of senior team members was increased.

Some new developments have also been performed by the team such as a new public API[4]

3. http://git-scm.com/
4. http://fenixedu.org/dev/api/

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Figure 2: FenixEdu new image

for others to have access to the system's information, enabling others to develop external systems or features using the data available on the system. This development allowed a better proximity between our team and the faculty community. The system has also changed its image (Figure 2) and the changes were presented on a conference organized on our faculty at SINFO[5]. I have also been evolved on some of those tasks, being by providing my opinion or feedback or by installing the hardware and software necessary for the events.

Every Thursday the team had a weekly meeting, where the main problems and future developments were discussed. It was not mandatory for students with scholarship to attend to this meeting, however i have been present in almost all of them because i think it helps to know the work being performed by the team and to know other team members better. There was also other monthly meeting specific for students with scholarships to tell the main problems being found and how we dealt with them.

There were also several socializing dinners and a Christmas lunch, where almost all the team members were present.

My schedule included twenty weekly hours with free schedule. I have tried different scheduling configurations but normally i have done about four daily hours. As the time passed i got used to this amount of work and to manage the time between work and school.

6 CONCLUSION

On this report i have detailed the various steps of my scholarship, since the initial training to a gradual introduction in the project. Several activities have been performed on my participation on the the FenixEdu project. Almost all the code and documentation developed is open-source and can is available to the community[6]. This activity will last until October and several tasks are to be developed until there.

[handwritten: In this type of document (Technical) the Conclusion should start with a summary o the Subject address and Then highlight the results]

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5. http://xxi.sinfo.org/index.php/home/schedule/schedule

6. https://github.com/mbborgez/fenix

TÉCNICO LISBOA

DIREÇÃO DE RECURSOS HUMANOS

DECLARAÇÃO

---- Nos termos do disposto nos nºs 4 e 5 do artigo 7.º da Lei n.º 40/2004, de 18 de agosto, alterada e republicada pelo Decreto-Lei n.º 202/2012 de 27 de agosto, diploma que aprova o Estatuto do Bolseiro de Investigação, e no Regulamento de Bolsas de Investigação do Instituto Superior Técnico, aprovado a 19 de outubro de 2011 pela Fundação para a Ciência e a Tecnologia, I. P, declara-se que, **Miguel Guerreiro Anão Borges** é detentor neste Instituto de uma bolsa de longa duração, na modalidade de bolsa de de Investigação, no âmbito do projeto e pelo período infra mencionados: ------ --

Projeto / Centro Custo	Data – Início	Data - Fim	Professor Orientador
Direcção de Serviços de Informática	14-10-2013	13-10-2014	Luís Jorge Brás Monteiro Guerra e Silva

---- A bolsa poderá ser renovada por um período de 3 anos. ----------

---- Mais se declara que o referido bolseiro aufere, desde **14** de outubro de 2013, a quantia mensal de € 745,00 (setecentos e quarenta e cinco euros). ----------

---- A presente declaração destina-se a ser entregue na Fundação para a Ciência e Tecnologia, I.P.. -- --------

---- Instituto Superior Técnico, **19** de junho de **2014**. ----------
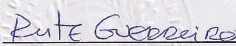
Direção de Recursos Humanos
Diretor

Rute Guerreiro
(Miguel Coimbra)

Figure 3: Statement of Execution