



Stock Management System

Reflection

Applied Computer Science

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Academic year 2022-2023

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INTRODUCTION

The current document provides information about the reflection of the internship completed by David Silva Troya at the company CERcuits.

The internship was done in the period of 27/02/2023 to 26/05/2023, 13 weeks in total.

During my internship at CERcuits, I had the opportunity to work on an exciting project called the Stock Management System. Over the course of the internship, I successfully tested and implemented the system, overcoming initial challenges and achieving all the objectives set for the project. This internship not only provided me with valuable technical experience but also offered insights into the inner workings of a company and the importance of effective communication and collaboration.

In the first part of my reflection, I will discuss the substantive aspects of the project. I will highlight how having a well-planned roadmap with clearly defined goals facilitated the development process of the Stock Management System. By selecting the appropriate frameworks and databases, I was able to create a versatile web application using Python in the backend. The system's flexibility allowed it to be used across various devices, saving time in development and offering potential for future expansions such as integrating an API and leveraging AI for analysis.

In the second part, I will delve into my personal experiences during the internship. Working in a small company like CERcuits provided me with a unique opportunity to interact closely with all team members. The friendly and supportive atmosphere, along with regular team-building activities, fostered a sense of belonging and encouraged open communication. Despite facing some challenges due to my limited experience, I received valuable guidance from my mentor, Ruben Mangelschots, and learned the importance of taking breaks for productivity and well-being. Additionally, I recognized the significance of language proficiency and cultural integration as a foreign student, which motivated me to further develop my language skills and actively participate in the company's activities.

1 SUBSTANTIVE REFLECTION

In the last week the project, the Stock Management System, was tested and working as it was expected. At the beginning of the testing some errors appear, actions that were not considered when the web application was developed, but all was fixed before the end of the internship. So I can say the project was a success.

At the beginning of the internship, based in the requirements and an analysis made from this requirements, a planning was made to set objectives and goals for the 13 weeks of the internship. I am glad to inform that all the goals were reach and all the objectives completed, being 9 objectives, 1 general and 8 specifics.

Having a plan with goals to achieve made easier the development of Stock Management System, starting with the selection of the relational database and the frameworks to create a web application with python in the backend.

With the designing of the Entity Relational Diagram and the Class Diagram, results in time saving once the folder structure started to grow, it was easier to know what classes and methods had to be used without making the mistake of repeat code, creating once again something that was already created but also to make abstractions.

Because it was selected to develop a web application instead of a web page and a mobile app in android, the advantages are that the application can be use in any device, saving time in the development but also giving the option of implementing an API in case the mobile app is necessary in the future.

The web application of the Stock Management System is currently being use in the company but still in a test mode. This because once all the objectives were completed and the web application working, it was possible to see that more features are need, like the option of import data to help the user of not having to created one by one all items that are already created in another system.

The project, web application of a Stock Management System, is in the first version, far from been considered completed but satisfying all the requirements the company had for the internship. Since the project is built in Python with Flask (Pallets Projects, 2023), there is potential to add more features in the future, such as integrating an API, implementing additional automations, leveraging AI for analysis.

2 PERSONAL REFLECTION

This internship for me has been a good chance to understand how a company works, how the people in the company interact with each other and all the experience they have related to the communication and co-working with other companies too.

CERcuits is still a small company, something that gave me the opportunity to interact with all the people working in CERcuits. Everybody is always friendly, open to talk with me and even inviting me to some team buildings on Fridays after the working hours.

In this project, I had the freedom to decide which framework, operating system, and database to use after analyzing the requirements. Explaining the reasons behind my choices and how they would work. As a result, the main challenge was on my part due to my limited experience in undertaking such projects and using new libraries. I underestimated the time required for certain tasks and objectives.

My mentor, Ruben Mangelschots, is a friendly and experienced programmer who provides valuable feedback for my professional life. The company didn't have problems with the number of days of working from home. The most important part for then was the advance and results of the project itself, informing and documenting the status, new features, problems, etc.

An important lesson I learned was the value of taking breaks for better productivity and avoid burnout. My mentor advised me to take regular breaks and even visit other offices in the company if I feel like it, for a fresh perspective. I always felt like I could do more if I was programming as much as possible in the time I had, but then the phrase "What's the point of 8 hours on the computer if only the first 3 hours are productive?" stuck with me, because based in the results of the previous weeks that was complete true.

I was able to understand better the importance of learning Dutch, if I want to stay working in Belgium and socialize in the way I like. Everyone was polite to translate what they were saying or to switch to English if I was interested in the conversation, but because my mother language is not English either I can understand that feeling of explaining simple things like jokes that are just not the same in other language.

Thanks to the experience in this internship my expectations for a company are better defined now. I know now how important is to have a team with good communication, this makes everything easier being able to ask without problems, motivating me to do my best in the company. So I would be looking forward to being in a company that organize team buildings, with a good communication plan.

Be working with people who understand what I am doing provides me a good feeling because it is easier to solve problems after explaining a solution I have in mind. And the feedback has more accuracy, allowing me to improve faster.

Learning new things is something I enjoy and by coincidence is a very crucial part of the IT world, where new technologies are arriving every day, so it is for sure I would like to be in a company with different kind of challenges that is always open to try new solutions.

3 CONCLUSIONS

The internship at CERcuits provided me with a comprehensive understanding of how a company operates, enhanced my communication and collaboration skills, and allowed me to gain practical experience in managing projects. These invaluable lessons have prepared me for future endeavors in the professional field.

The friendly and supportive atmosphere at CERcuits fostered a positive work environment where everyone was willing to help and collaborate. The team's openness and inclusivity created a sense of belonging, enabling me to thrive and contribute effectively to the company's objectives.

The guidance and mentorship provided by Ruben Mangelschots, along with the insights shared by Frederik Luppens, were instrumental in my personal and professional growth. Their expertise, constructive feedback, and willingness to impart knowledge and advice greatly influenced my understanding of the industry and shaped my future aspirations.

Through my internship, I learned the importance of balancing productivity with adequate breaks. The realization that prolonged hours in front of a computer do not necessarily equate to higher productivity has led me to adopt healthier work habits and prioritize self-care, ensuring enhanced efficiency and overall well-being.

Being a foreign student, the experience at CERcuits highlighted the significance of language proficiency and cultural integration. While the team accommodated English as the primary communication language, I recognized the value of learning the local language to fully engage in spontaneous conversations and foster deeper connections with colleagues.

Reflecting on my experience, I now have a clearer understanding of the qualities I seek in a future company. A strong emphasis on effective communication, teamwork, professional development opportunities, and an openness to embrace new challenges are key factors I consider essential for a fulfilling and successful career.

4 REFERENCES

Pallets Projects. (2023, June 2). *Welcome to Flask*. Retrieved from Pallets Projects:
<https://flask.palletsprojects.com/en/2.3.x/>
