

Continued Professional Development

COMP160 - CPD Report

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1 Introduction

As discussed in my previous CPD, I am interested in the development of accessible games for children with special educational needs. During the semester, I have explored accessible gaming in both the software engineering essay and in researching accessible gaming controllers for the comp140 hardware project. This has strengthened my understanding of software accessibility requirements, and how these can be implemented using existing technologies and models. Software engineering practices, such as the use of ontology and traceability, are important in designing robust and accessible software. This semester, I have struggled to understand and implement such practices, and therefore, have included software engineering practices in the five key areas I wish to improve. The further areas I have identified are; programming language proficiency, balancing assignments alongside other responsibilities, making better use of opportunities and improving concentration.

2 Programming Language Proficiency

During this semester, I have increased my time dedicated to programming practice. However, this has been heavily focused on blueprints rather than C++. Due to poor

time management, my programming has been driven by the need to get mechanics in game as fast as possible. As such, I have not planned the architecture of my code effectively, leading to poor maintainability.

In addition, I have neglected practicing C++. As proficiency in more than one programming languages, and especially C++, allows for more opportunity upon graduation, I wish to focus on C++ next semester, using blueprints predominantly for functions designers and artists need access to.

Over summer I would like to build a small game in Unreal using C++, focusing on best practices for the entire developmental process, from ascertaining requirements and designing architecture through to implementation and testing. As I will not have the same deadline pressures as during term time, I hope to be able to practice dedicating the required time to each stage of development. In the games industry, it is important not to undervalue best practices in software engineering, as it can prevent issues later, produce more maintainable code and help prioritize features needed [1].

3 Software Engineering Practices

In our Comp160 module, I have struggled to understand how to use ontology, such as UML diagrams, in planning a software's architecture. In my research, there is evidence of a tendency for students to undervalue the need for software engineering best practices [1]. In our lectures on UML diagrams and databases, I found we tended to diminish the need for the tasks assigned to us. This may have been due to time pressures related to our Comp160 and Comp140 games, leading us to see more theory based lectures as time taken from the practical work we needed to complete. Due to my lack of focus in these classes I am unconfident in this area and aim to use my summer project to practice implementing software engineering practices.

Next semester, I aim to start taking notes during lectures as I think this will help improve my concentration and understanding of topics being discussed. I also have a

Dictaphone which may be worth experimenting with, although I am unsure how effective I will find this.

4 Balancing Different Assignments and Other Responsibilities

The ability to balance workloads as well as outside responsibilities, is an important skill for a future career in the games industry. Using my time at university to practice meeting deadlines, balancing my time between different assignments and preventing outside responsibilities detracting from my studies, will help prepare me for the increased pressures of the workplace. I have found the social pressures of our group project has led me to focus heavily on the game, therefore, falling behind on other assignments.

Although, I have plotted a study timetable at the start of each week, I have struggled to follow these. For next semester, I plan to assign each week day to one task, helping ensure I spend adequate time on all assignments, without the rigidity of a timetable.

5 Making Use of Opportunities

During our first year, I have not made use of the opportunities available to us, such as; Global Game Jams, guest lectures and volunteering at events. I have found adjusting to the amount of social time needed at university challenging, especially at the start of the year, making attending extra events difficult. However, in our second year, I would like to make better use of such opportunities. As I do struggle socialising for extended periods, I aim to commit to one activity a month to start with and increase as suits. The Global Game Jams will be especially beneficial to me, giving me a short and focused time-frame to practice programming and team skills, as well as the chance to work with and learn from the years above us.

6 Concentration

Concentration is an area I identified previously, which needs to improve. Maintaining concentration is something I find difficult in general, for example; I struggle to sit and watch films or even one hour TV episodes from start to finish. I have found the Pomodoro [2] technique helpful, but often forgot to make use of it. Downloading the Pomodone App [3] on my phone may serve me better, rather than on my home PC, as then I can also use Pomodoro when working in the studio.

7 Conclusion

For our next semester, balancing my time and managing my concentration, are foundational skills I need to be able to improve the remaining three. Therefore, I aim to assign each assignment to one or more days of the week and this day will be used to work solely on tasks associated with the assignment, within reason. This should help me balance my personal work and the group project more effectively. With the demanding time-pressures typical of the games industry, time-management skills are vital for good project management. I also intend to use the Pomodone App [3], to improve my concentration at home and in the studio.

References

- [1] S. T. Frezza, "Issues in student valuing of software engineering best practices," in *2016 IEEE Frontiers in Education Conference (FIE)*, Oct 2016, pp. 1–4.
- [2] F. Cirillo. (2011-2016) Pomodoro technique. Cirillo Company. [Online]. Available: <https://cirillocompany.de/pages/pomodoro-technique>
- [3] Pomodone app. Dip Studio. [Online]. Available: <https://pomodoneapp.com/>