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DEPARTMENT OF COMPUTER SCIENCE

Software Engineering Project (SEPR)

Open Group Assessment

Module	Software Engineering Project (SEPR)
Year	2019/20
Assessment	4
Team	The Dicy Cat
Members	Michele Imbriani Daniel Yates Luke Taylor Isaac Albiston Martha Cartwright Riju De Sean Corrigan
Deliverable	Project Review Report

3. PROJECT REVIEW REPORT

3.1 TEAM MANAGEMENT AND STRUCTURE

Coming into Assessment 4, the **team was not subject to any relevant change in structure nor management**. The reason is because after the major adjustments that occurred at the beginning of Assessment 3 (i.e. change of Project Manager, division of team in sub-teams based on competence and skills) our unit felt that a perfect balance and organization were finally achieved. Nonetheless, every team member reflected on the ways and the reasons why some aspects of structure and management methods thoroughly evolved throughout the course of the project, as well as why some other aspects didn't.

With reference to the "4.2 Team organisation" section in "Methods selection and planning" document delivered in Assessment 1 [1], the decision of assigning defined roles -Project Manager, Tech Lead and UX Lead- to only three people, while keeping the rest of the team in flexible positions did not yield the hoped results: this approach largely neglected the fact that every different component of our team has different abilities, competences and preferences, and allowing them to each work extensively on something they enjoy and are proficient at is a far better decision than splitting their workload between all the tasks, including those in which they perform poorly. Nevertheless, as explained in "Method and Plans report" section in Assessment 3's "Change report" document [2], the **high flexibility** in roles established initially **allowed** us to **make changes without negative side effects** on the outcomes, such as the subdivision of the team in more refined sub-teams in assessment 2 [3] and 3 [2], and the change in Project Manager occurred at the beginning of Assessment 3.

This consequently led to areas of the project, such as risk assessment and mitigation, to remain largely unchanged: some risks' likelihoods/severities got tweaked and a small number of new risks had been implemented at the end of Assessment 2 [4] -however they represented risks concerning the task of picking up a new project developed by a different team, therefore making it impossible for us to foresee them in Assessment 1. Our team spent a considerable amount of time assessing and eliciting the most appropriate and proficient methods from literature and textbooks, which paid off by providing a risk-free and reliable workground to build our project onto. This also played a fundamental role with regards to handling the unforeseen **events concerning the outbreak of the Covid-19** virus which not only endangered the team member's health and safety, but also affected the way the team carried out Assessment 4's tasks. As a matter of fact, the safety measures put in place by the University ruled out the possibility of having face to face meetings which were one of the main and most efficient ways our team used to work together. This has been a massive drawback to the momentum our unit gathered towards the end of Assessment 3; despite this, we all understand that in a hectic and fast-paced work environment such as the one characteristic of software developing companies, **resilient attitude and adaptive spirit in unexpected circumstances** such as this **are key traits in successful developers**. As explained in the "Risk Assessment and Mitigation" document delivered in Assessment 1 [5], the team decided to identify and highlight in red the top 5 risks in the risk table that threatened the project the most, which, among the others, included <<R12: Key developers are ill or unavailable at critical times>>. The pre-emptive classification of this risk among the top 5 made sure that everyone in our team was well aware that in the unfortunate eventuality a member got ill -or was not able to contribute to the project for any other reason- everyone else would have had the duty to fulfil his/her spot. Furthermore, early on in the project we decided to implement alternative methods for delivering group meetings whenever face to face meetings were not an option, using tools such as Discord and Trello. In the "Update do methodology used" section in the "Method Selection And Planning Update" document delivered in Assessment 2 [3] we also pointed out that the team would try to switch out as many online meetings with in person ones as we could, but it is important to note that online meetings were still a relevant means we relied on: as a matter of fact, our team had an average of one online meeting per week. When the Covid-19 health safety policies came into play, our team was therefore experienced and confident enough to be able to take on the challenge of moving all team meetings online. Finally, having identified <<R10: The organisation is restructured so that different management are overseeing the project>> [3] as one of the top 5 risks allowed a smoother and more risk-free transition between the old and new Project Managers.

3.2 DEVELOPMENT METHODS AND TOOLS

Throughout the whole course of the Project, the fundamental developing method our team adopted was the Agile Scrum method. Looking back on it, the reasoning behind the choice of this method explained in Assessment 1 [1] and the predictions made regarding its appropriateness with our project turned out to be true. As the project is approaching its ending, our team acknowledges how the adoption of the Scrum method laid the foundation for easily deal with changing risks and needs: with each sprint lasting only one week and with periodical group meetings at the end of them, accommodating new product requests or modifying old ones turned out to be less requiring than it would have otherwise been.

Other constants that remained firm throughout the whole project are the collaborative tools Google Drive, GitHub and StarUML. Our team decided to pick them up in the beginning of Assessment 1 [1] because of their combination of simplicity, efficiency and popularity: this revealed to be a wise choice, as we stuck with them throughout all of the 4 assessments.

As mentioned in the previous section, two other software which played a crucial role in the positive outcome of the whole project -especially of Assessment 4-, but which were only picked up in Assessment 2, are Discord and Trello. While the former has always served as a mere communication platform (thus, it has not been subject to many changes in the way the team utilised it), the latter has been used in slightly different ways in each project. As explained in the "Development and collaboration tools" section in the "Method Selection And Planning Update" document [6], the way we used Trello in Assessment 2 was by creating tasks for each sprint, grouping them by category (movement, attack mechanics, projectiles, etc.) and assigning them to team members. This approach was proficient and appropriate because of the large amount of workload that needed to be delivered for that assessment. However, because Assessment 3 and 4 were not based around creating a game from scratch like in Assessment 2 but were more about implementing new features and modifying old ones in an already made game, we decided to slightly modify the way we used Trello. Furthermore, the team structure evolved from one in which every member worked on all tasks to one where each member was assigned to one of 4 sub-teams (thus, more refined and specialised): it was therefore appropriate to reflect these changes in the way we structured tasks division on Trello as well.

As a matter of fact, in Assessment 3 and 4 tasks were not created sprint by sprint anymore but were all elicited at the beginning of the Assessment and carried on throughout. They were also divided by sub-team rather than category, which had a two-fold effect: not only did it eliminate the need to assign task a priori to each team member (which was a relatively time-requiring task to do every week), but it also encouraged sub-teams intra-management, a highly-praised trait of successful big and small teams and organisations according to Clegg et co. [6], as it allows member belonging to a certain sub-team (who have a much more in depth understanding of the tasks at hand than the Project Manager) to have more control over the internal task division.

Finally, it is important to note that, as carefully explained and discussed in the last paragraph of "Methods and Plans Report" [2], the team took into account and evaluated a wide range of software that could aid the development process of the project, weighing pros and cons based on not only their affinity with our purposes, but also with their popularity among senior software developers online.

In conclusion, we think that our team performed extremely well in the methods and tools selection, planning and update aspect of the project development, ultimately leading to a successful and fruitful final result, which every single team member is extremely proud and satisfied of.

References:

[1] Assessment 1, Method Selection and Planning: https://drive.google.com/file/d/1EOfTPnGPMR3hw5HkDnFCi97f86zmLht2/view

[2] Assessment 3, Change Report: https://dicycat.github.io/files/Change3.pdf

[3]Assessment 2, Method Selection And Planning Update: https://drive.google.com/file/d/1cqy-NK5k1H-jEicRriSJz0B8wO4sRy-i/view

[4] Assessment 2, Risks Assessment and Mitigation Update: https://drive.google.com/file/d/1UD0frmavJWK5oMfXCEIceYgVXL2Dz5iM/view

[5] Assessment 1, Risk Assessment and Mitigation: https://drive.google.com/file/d/1sqgN7q7H6d9vmKAXdcDOQuQn7Yuc-tlk/view

[6] Clegg, Stewart, Kornberger, Martin, Author, Pitsis, Tyrone, Author, and Mount, Matthew, Author. Managing & Organizations : An Introduction to Theory and Practice. Fifth ed. Los Angeles : SAGE, 2019. Print.