Project Review Report

Team Management & Structure

At the beginning of our project, we avoided assigning roles to each team member. While this was mostly due to not entirely knowing what would be required of each role later on in the project, it was primarily due to the lack of knowledge around each individual: what their skills, preferences or confidence level was. As we decided on a relaxed Agile method, the main role that needed to be assigned, other than the Product Owner, was the role of SCRUM Master. This was split between two members to allow more flexibility and hopefully improve their performance. We chose to continue this in Assessment 2 to allow for team members to switch between jobs and roles, especially since we had not started producing code prior to this point and had not experienced any problems. During the first two assessments, each team member naturally found their preferred area, whether programming, documentation or graphics production; unofficially producing three teams to cover those areas.

During the third assessment, after adopting Geese Lightning's project, we followed their methodology and assigned the team members to similar roles to what they were already following, with the support of group votes. The role of SCRUM Master was merged with the role of Team Leader as to their documentation. Assigning official roles to the team had both advantages and disadvantages: some team members found they had more confidence in approaching their assigned tasks or approaching other team members, while also unfortunately causing some members to feel more constricted and pressured. Such an observation is one seen often in Role Theory, where "role occupancy can lead to constraints on the performance of behaviors, as well as to the development of skills and abilities associated with those roles."[1]. To combat this, alongside the increase in work pressure outside of the module, team meetings were increased to twice a week, ensuring the presence of a collaborative environment. Additionally, we introduced the use of a review form to encourage development and provide feedback [2].

Having chosen a SCRUM framework in Assessment 1, there were very few changes, other than the assignment of team roles, over the progression of the project and through project and requirement changes. It is likely this was due to the flexibility of the framework itself and its suitability for the situation of the project: with other time and work commitments, the sprints allowed a large amount of work to be completed in a short time period, allowing for these other commitments. A more rigid approach to our methodology might have caused team burn-out, a situation which would have made the project much harder to complete.

When comparing our team to the Software Capability Maturity Model (CMM) [3], it is likely the highest level we achieved over the course of the project would be Level 4. Having not experienced working in a team for this level of project and starting our development at Level 2 through the support of our module, it is clear the team has adapted and developed over the project timeline, seen in the CMM and deadline feedbacks.

Software Engineering Methods & Tools

A general condition that our team had chosen during the project was to stick to LibGDX projects due to two members of the group having had prior experience with the tool. This enabled us to move quicker through the programming, with our group being supported by these members. Similarly, we avoided projects which used Box2D due to not having prior experience and wanting to avoid losing time in order to learn this tool. Though this did limit the amount of projects we could choose from, it meant we had more time to prioritise the quality of the program.

GitHub was initially chosen as our tool for Version Control to allow for individuals and other teams to use their own preferred programming software and due to most teams being familiar with it, having been introduced to it during First Year. This is also the reason we chose Google Drive for storing our documentation, alongside for allowing for multiple team members to easily collaborate on a document. Neither of these tools needed to be changed during the project as they met our needs, while appearing to be popular choices once projects were being exchanged. They were additionally extremely useful for encouraging collaboration, allowing members to review and edit documents together.

Over the course of our project, communication became inherently more important. We began Assessment 1 opting to use only Facebook Messenger while holding infrequent team meetings to discuss the project's progression. By Assessment 2, it was clear that this was not enough. We improved communication by increasing the number of team meetings to a minimum of twice a week. This allowed team members to discuss issues or queries more thoroughly, eliminating any miscommunication that could occur through an online messenger. There was some discussion in Assessment 3, after adapting to a new team's methodology, to increase these meetings to three or four times a week. However, we decided against this due to an increase in work in other modules and illnesses within the team. Instead we decided to adopt Slack, as an addition to the in-person meetings. This consequently helped to increase work production during the holidays and extended weekends.

To organise and distribute tasks between team members, we chose to use the ASANA software [4] throughout the course of the project. When adopting Geese Lightning's project in Assessment 3, there was some discussion to follow their methodology and instead use the GitHub Project Boards. We voted against this, as no one in our group had any prior experience using this tool, while we all had experience using ASANA from the previous assessments and not wanting to set time aside to learn this tool.

Before starting assessment 4, our team reviewed and discussed the decisions made by our project's previous team. There was several similarities between the two teams. Google Drive and Github had also been employed for version control and file sharing. The main difference in our approach was the application used for organising and distributing tasks. While Shaun of the Devs had been using Taiga, our team used ASANA. We decided this was a minor difference and continued to use our previous tool, as the core functionality of both softwares appeared similar.

Bibliography

[1] iResearchNet, "*Role Theory in Social Psychology*" [Online]. Available: https://psychology.iresearchnet.com/social-psychology/social-psychology-theories/role-theory/ [Accessed 21-Apr-2019]

[2] Abstract Delete, "*Review Form*" [Online] Available: https://docs.google.com/document/d/10ubzES-CAPbyQI2vUpX3xXogEBCpWE4tl9qFQAtdW6E/edit [Accessed 21-Apr-2019]

[3] ITGovernance, "*Software Capability Maturity Model (CMM)*" [Online]. Available: https://www.itgovernance.co.uk/capability-maturity-model [Accessed 21-Apr-2019]

[4] ASANA [Online]. Available: https://asana.com/