Salt N Sepr

Group Members:
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Method selection and planning

Development and collaboration tools

The team has chosen to use the agile method SCRUM, as it fits into the framework of the software engineering project. There are many benefits to using SCRUM; such as lowering the risks by keeping a transparency for product owner and stakeholders and the team. There is a flexibility that allows adaptability for customer changes and requirements; which other methods do not allow for as there is a higher amount of documentation to the project. With less documentation that comes with SCRUM changes are easier to handle as clarification through documentation.

Agile methods are based on a manifesto with four principles: individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation and responding to change over following a plan. With these four principles, the characteristics for agile methods are incremental, cooperative, straightforward and adaptive.

By doing weekly sprints we develop an incremental approach, that keeps the team and project open to new requirements from the customer and therefore we also remain adaptive in our approach. By using this method we create a straightforward approach with clear documentation of how the project will proceed.

By using the SCRUM method, the team will perform weekly sprints and therefore maintain a deadline one week before hand-in; with daily stand-ups over Facebook Messenger.

For development tools we will be writing the application in Java whilst using the libGDX open-source framework [1]. Using libGDX as our framework will allow us to reuse code between platforms, significantly decreasing the amount of new code that has to be written, increasing the speed at which it can be ported.

LibGDX is specifically good for 2D games, which is the format our game will be. It functions with programming languages Java, C and C++, with the requirement that we have to use Java for our game [2]. Using libGDX allows for Java tools to be reused as the framework is Java based. Furthermore, on its own Java has a slow performance[3], however libGDX uses Java Native Interface (JNI) which uses a native platform that enables Java to run on a virtual machine. This means that Java can be used in combination with languages as C and C++, which can handle different methods better than Java and which are more close to assembly code. As another tool within libGDX we will use the 2D particle editor which allows us to make 2D effects for our game, such as the water effect from the fire engines; with the 2D editor it allows for velocity, duration changes and in which direction the water is going[4].

One of the tools used for collaboration between the team is Github. Github is a code sharing platform that uses the git version control system, improving the ease of multiple people working on the same codebase between weekly sprints. We will also be using Google Drive for storing and collaborating on documentation as well as report taking. Lastly, Facebook

Messenger will be our main means of communication for daily updates on progress and will allow us to solve simple problems with no meet-up face-to-face necessary. Using several platforms for different aspects of the project will allow more organisation and structure between code, documentation and daily updates.

Team organisation and why

The team members have been allocated different roles in the group based on Belbin team roles which will help create a high-performing team. The different roles are based on the strengths and weaknesses of each team member, which will result in a more efficient group [5]. We use the Belbin team role assignments as they can be adapted to the team and roles can be allocated to more than one person so it fits more directly to the person and the teams working ethics. The following list is how the team roles have been allocated for the first assessment.

- Joshua Levett - Specialist
- Jake Schoonbrood - Completer finisher
- Archie Godfrey - Monitor evaluator and implementer
- Matteo Barberis - Resource investigator
- Alberto Lee – Plant
- Jacqueline Eilertsen - Team worker and co-ordinator

These roles have been allocated to each individual person on mutual agreement of the team. The roles were assigned to each individual by using a team role test [6] that shows the most prominent traits for each individual; the results were then applied to the Belbin role strengths and weaknesses and what the member felt most comfortable with.
Joshua Levett showed equal strengths as executive, analyst and expert from the team role test, based on this and what he was comfortable with regarding the roles in Belbin he was allocated the specialist; who shows in-depth knowledge of key areas.

Jake Schoonbrood was allocated the role as completer finisher who is a perfectionist and will correct all errors; in the test Jake Schoonbrood biggest trait was as a driver which means he is ambitious and energetic: needed for the end of an assessment to make corrections and a finishing touch. With this considered and what he felt most comfortable with he got the role as completer finisher.

In the test Archie Godfrey had most percentage as an expert, which means he showed great skill with a specific task at hand and have therefore got the roles implementer and monitor evaluator as the definition of these roles is providing a logical eye and able to carry out strategic plans.

The resource investigator is an optimistic and outgoing person who explores many opportunities and bring ideas to the team; with this in mind and the test results being majority innovator, Matteo Barberis was allocated the role as resource investigator.

Alberto Lee got the role as plant; this means he is the creative and imaginative mind of the team which also suits the test where he scored most as an innovator. Furthermore he felt

confident in being able to contribute a lot to the game design and implementation as he has experience making games.

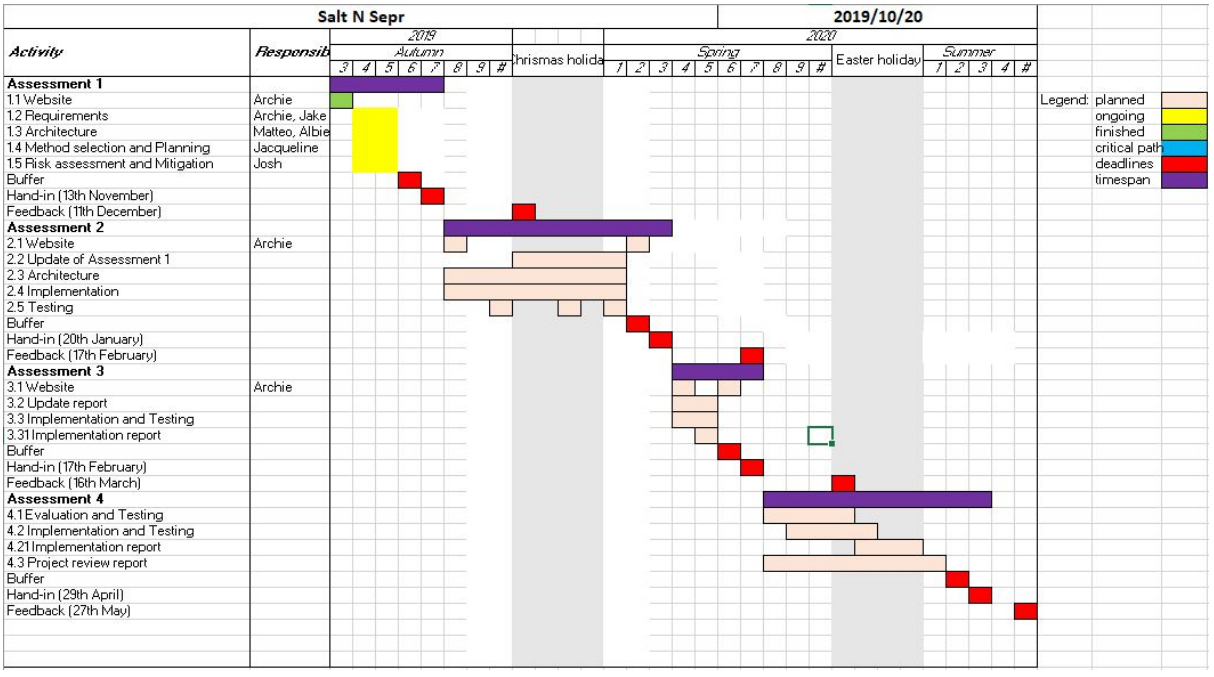
As a split between team worker and co-operative Jacqueline Eilertsen was allocated she showed most skills as an executive and chairperson during the test. By definition of the team roles the team worker and co-operator shows focus on the team and team member strengths by being diplomatic and perceptive.

These roles have been delegated by the team as a whole and who is most confident having which role in the team; the roles will be maintained throughout the project unless it is seen unfit or the team no longer has the need for that role.

Plan for rest of SEPR (dependencies and critical path)

The most common task dependency is finish-to-start which means the predecessor task needs to be finished before the next task, the successor, can begin [7]. Using this approach assessment one needs to be complete before assessment two can begin. This includes the updating of the assessment briefs and documentation. In regard to dependency for each individual assessment tasks will run alongside each other as to maintain the plan for finishing a week before the hand-in deadline; however, some tasks do depend on the previous task such as implementation and the implementation report are dependent on each other, as the report cannot be done before the implementation is done.

The future for the project is shown in figure below.



The figure shows the plan for the future of the SEPR project with all the tasks required for each assessment and the duration of each task within the assessment. We aim to finish all of our assessments a week before each hand-in date, which is what the buffer represents. By having a buffer we leave ourselves extra time to redo and go through all of our tasks as a group, as we split up tasks to individual or smaller groups so we are more efficient in our

workload. The key tasks for all of the assessment is laid out on the figure, along which the earliest starting dates and latest finishing dates.

The critical path for this plan can also be seen on the figure. When a task finishes and another start there is a critical path; however, we will aim to be able to run parallel in regards to for example implementation and implementation report, as not to waste time. Under assessment two testing would be reliant on implementation although it is going to be done in intervals throughout implementation.

For assessment two, the workload is going to be split between smaller groups where each individual is working on parts that suits their strength. The key tasks for assessment two within the main tasks are implementing two fire engines, three ET fortresses which should not be able to improve over time, ETs should not be able to destroy the fire station. For the architecture there needs to be a structure of code with a specific programming language and the tools used. These are the general tasks for assessment two including the implementation tasks and other tasks such as the updating of assessment one and architecture.

References

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