Module	Engineering1 (Eng1) - COM00019
Assessment Title	Assessment 2, Cohort 2
Team	Dragon Boat Z (Team 18)
Members	Robert Dalgleish, Benjamin Jenner, Joseph Lonsdale, Richard Upton, James Wilkinson, Xinyi Zhang
Deliverable	Risk Assessment and Mitigation 2

Risk Assessment & Mitigation

We have identified risks that we believe are relevant to this project by going through a number of sources.

1. Researching general software development risks.
2. Discussing with other people who have had previous experience. 3. Discussing hypotheticals amongst ourselves and evaluating them.

To further develop the risks anticipated during Assessment 2 a discussion was used to elicit and further develop the existing risks. The Risk Management, Mitigation and Monitoring Process was used to manage and monitor the risks:

- Risk Mitigation process to identify risks and categorize them into a tabular format with the following defined 7 features.
- Risk Management outlining potential mitigations that could help to overcome the outlined risk.
- Risk Monitoring was used to outline a review process on a regular basis to monitor for changes to risk level

Risk Mitigation and Management

We have chosen to deliver this in a tabular format. There are 7 defined columns for each risk.

- ID is the identification string associated with each risk.
- Description is a brief description of the risk.
- Likelihood is the probability of that risk occurring on the following scale: Low, Medium, High
- Severity is the anticipated level of damage the risks have if it occurs. This was described on the scale: Low, Medium, High
- Rank details an assigned numerical rank (1-6), which takes into account the Severity and Likelihood. It means risks with a higher rank are prioritized when monitoring for risk developments.
- Mitigations details possible plans that can be used to lower or remove the impact of the risk occurring
- Ownership details the individual(s) that are responsible for managing and mitigating that risk. Our risk ownership is determined by who is most likely to experience that risk and who could help mitigate the risk.

Risk Monitoring

Our risk assessment has been updated continuously since we have started this project. With it being reviewed every fortnight. Ensuring that the risks were still relevant even with a change in scope or if new risks have been identified. To continually monitor and develop these risks, the weekly SCUM Review was used by the risk owners to discuss if any developments or early signs of a risk were showing and what should be done to mitigate these at an early stage.

Tabular Representation of Risks

Project Risks

ID	Description	Likelihood	Severity	Rank	Mitigation	Owner
1	Loss of work due to corruption or human error	Low	Medium	3	Frequent creation of backups both internally and externally	Ben, Will
2	Unforeseen Circumstances (e.g. Loss of a team Member due to illness)	Low	Medium	3	Have a backup for everybody's role (high bus factor) Stick to the critical path if this involves dropping requirements that are deemed to be the least important. Redistribute tasks amongst remaining team members	Richard, Joe
4	Requirements changes	Low	Medium	2	Have a flexible code that we can change easily	Xinyi, Ben
8	Github servers become unavailable/ Code is lost	Low	High	2	Store files across a variety of platforms, including google docs and local Copies Use Github to restore a previous version	All
10	Tasks assigned take longer than anticipated	High	Medium	5	Move the task(s) to the backlog and focus on the critical path. If no time is available to complete said task(s) drop the least important requirements associated.	Richard
11	Postpone Blackbox and Whitebox Testing till too late	Low	High	4	Stick to the outlined Gantt Chart Plan to start work on Testing early in the project lifecycle. Focus on WhiteBox Unit testing to make sure that the core functionality works.	James
7	A task is not completed during a Sprint Session	High	M	5	Monitor task progression during Sprints and assign more people to the task depending on its priority and whether other tasks are dependant on it	Richard
12	Failure to break down the coding work into a detailed plan with a clear critical path	M	M	3	At the start of the project, detail a clear Project plan indicating time allocated to tasks and the critical path	Joe, Ben

Product Risks

ID	Description	Likelihood	Severity	Rank	Mitigation	Owner
5	Unavailable documentation for the libraries	Low	Low	2	Use a popular library with lots of tutorials online	All
6	Difficulty in Creating appealing graphic assets	Medium	Low	2	Use simplistic art-style and/or look for assets online	Ben
3	Game Engine limitations	Medium	Medium	3	Focus on simple mechanics that meet the requirements	Joe, Ben
9	Difficulty implementing the project architecture	Low	Medium	2	Build a clear architecture and help team members to implement the project in a simple and straightforward manner through code reviews	All
13	The Java Library (LibGDX) is no longer supported	Low	Medium	3	Decide on the next best alternative library that can be used, using the research previously conducted	Xinyi
14	Postpone Blackbox and Whitebox Testing till too late leading to the final product being inadequate	Low	High	5	Stick to the outlined Gantt Chart Plan to start work on Testing early in the project lifecycle	Richard, James
15	Features requested by the stakeholder are not implemented	Medium	H	4	Elicit requirements and clarify any requests early into the project lifecycle. Maintain communication with with Stakeholder to notify of development	Will, James
16	Lack of programming ability amongst team members resulting in missing features	L	M	3	Assign tasks based on the ability of the team member to avoid a potential backlog.	All

Business Risks

ID	Description	Likelihood	Severity	Rank	Mitigation	Owner
17	The code is not expandable to accommodate new requirements	Medium	High	3	Spend time analysing the onboarded code and during SCRUM meetings spent time reviewing code quality during the Implementation phase	Joe & Will
18	Difficulty acquiring the right software to develop the game	Low	Medium	2	Search around different valid combinations of software that could be used to develop the game	All
19	The final product is incomplete (does not satisfy all requirements)	Medium	High	6	Focus on the critical path through the duration but detail and document key missing features	Will, Joe