

RISK ASSESSMENT **AND MITIGATION**

Group 3

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We followed the risk management process outlined in the textbook [1].

Risk Identification

This stage involved examining and discussing various topics:

- Scheduling of our project
- Availability of team members
- The coding abilities of each team member
- Assets and libraries we were going to use

We then identified what issues could arise in each of these topics. For example the library we chose LibGDX has known bugs (<https://github.com/libgdx/libgdx/issues>) that could potentially affect our end game.

Risk Analysis

After various potential risks were identified we started investigating how likely they were and their potential impact. In the case of bugs in LibGDX, we realised that these bugs are very high level and unlikely to affect our simple project. Hence it is not included on the final risk register.

Risk Planning

This stage involved examining each risk and deciding strategies to avoid them happening. An example of this is agreeing on a documentation style guide to mitigate the risk of inadequate documentation.

Risk Monitoring

This is a continuous process in our project. We would regularly review our risks and change their likelihood, severity values. Risks that had been identified early on but did not end up happening were removed

Format Of Risk Register

Id	Type	Description	Likelihood	Severity	Mitigation	Owner
Number for each risk	<u>Each Risk Affects:</u> Project - Schedule of Project Product - End quality of product Business - Wider organisation issues	Briefly describes the risk	Chances of this risk occurring. VALUES: LOW MEDIUM HIGH	Damage this risk can cause VALUES: LOW MEDIUM HIGH	Steps taken to avoid this risk	Who is responsible for handling this risk

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
R1	Product	Difficulty in balancing game mechanics	High	High	Prioritise simplicity and intuitive design to mitigate potential confusion.	Liam, Sammy
R2	Product	Inadequate documentation of code and processes	Medium	Medium	Enforce documentation standards and practices throughout the development process.	Lucy, Lia,
R3	Product	Difficulties in finding suitable music that is not licensed or copyrighted may delay the selection process	Medium	Low	Consider not adding music	Kai
R4	Product	Integration issues arise when attempting to incorporate all necessary assets leading to problems	High	High	Implementation team should collaborate closely to ensure seamless integration and functionality.	Liam, Tim
R6	Product	Pixel based UI elements fail to scale properly across different screen resolutions resulting in poor user experience and usability issues.	Medium	Low	Conduct extensive testing on different resolutions to identify and address any scaling issues. Implement dynamic UI scaling algorithms to adjust element sizes and positions based on device characteristics.	Lucy, Liam
R7	Project	One member of the implementation team uses Mac whereas all others use Windows. Platform differences may slow down cause issues in development	Low	High	Find tools that specifically cater to both platforms.	Tim
R9	Product	Initial scope	High	Medium	Regular communication	Zac

		changed due to customer requirements.			with customer and looking at user requirements to ensure requirements are clear and met	
R10	Project	Underestimation of task complexity or effort leading to delays.	High	Low	Implement agile methodologies with frequent reviews and adjustments. Build in buffer time for unexpected challenges.	Lia
R11	Project	User evaluations being held too far into the project as obvious bugs haven't been dealt with, meaning there may not be enough time to implement all changes.	Medium	High	Communicating regularly with the team r.e. updates on the state of the game and regularly running unit tests.	Kai, Lucy
R12	Product	Changing the code frequently may cause components to break more frequently.	High	High	Using the unit tests in order to identify potential issues with the code and fixing them accordingly.	Sammy
R13	Project	Changes to Group 1's original deliverables not being tracked properly.	Medium	High	Making a Trello Board and Google Doc to track changes made	Lia, Zac
R14	Product	Inadequate playtesting leads to undiscovered gameplay flaws or imbalances.	Medium	Medium	Conduct thorough playtesting sessions with diverse groups of players to identify and address any gameplay issues before release.	Liam, Kai
R15	Product	The GUI of the game is confusing and so the player has a poor experience	Low	High	Make sure that everything is simple and easy to understand, providing explanations where necessary and maybe including a small guide to the game	Sammy

References:

[1]I. Sommerville, Software engineering, 10th ed. Pearson, 2016.