

# Risk Assessment and Mitigation

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## Risk Identification

After Assessment 1, we reviewed their document and then discussed and brainstormed all the potential risks that could be encountered during Assessment 2. After discussion, overlapping or low-likelihood risks were removed, and high-priority risks were then prioritised and included. The risks were defined based on the assessment brief and the client's requirement. The confirmed risks were then categorised as technology, product, project and requirements.

## Risk analysis

Each risk was evaluated and assigned a likelihood and severity rating based on collective team judgment. This process is going to significantly assist in controlling potential issues that will have a great effect on the project if not accounted for.

Likelihood measurement shows how likely is a specific risk to become an issue.

- Low - Unlikely to happen (0% - 40% chance)
- Moderate - Could possibly happen (41% - 60% chance)
- High - Very likely to happen (61% - 90% chance)

Severity indicates the impact a risk could have on the project if it occurs.

- Low - Minor impact that is easily managed
- Moderate - Noticeable impact requiring attention
- High - Major impact and potential disruption beyond original scope

## Risk planning

Each risk was followed up with analyses focusing on how an issue could be completely avoided or at least minimised. The team implemented a planning system which helped arrange deadlines and track progress in order to minimise risks across the board. Additional brainstorming sessions were held to develop specific solutions to problems in case of minimisation strategies failing. Team members responsible for the discussed aspect of the project were then assigned as the owners of the risk.

## Risk monitoring

To provide structure and consistency to risk management, a register containing the fields described below was constructed.

- ID - Unique identifier of the risk
- Type - Identifying what type of risk
- Description - What the risk is
- Likelihood - How likely the risk is to happen
- Severity - How big of an impact the risk might have on the project
- Mitigation/Avoidance - How to avoid or minimise the risk
- Monitoring - How to monitor the risk
- Owner - Team member responsible for the mitigation strategy execution and monitoring of the risk

The same version of the table was also extended outside of the document with dates and progress reports to assist owners in managing risks.

ID	Type	Description	Likelihood	Severity	Mitigation	Monitoring	Ownership
R1	People	Team members getting sick, falling behind or struggling with the task	High	High	Have at least 2 people working on all aspects of the project	Communicate with the team and see if any team member is expected to be unavailable	Everyone
R2	Technology	Performance issues on low-end hardware	Moderate	High	Adjust for standard desktop hardware and support full screen	Test core system early and review code regularly	Ben & Lilac
R3	Requirements	Not accurately following the game/client requirements	Low	High	Communication between team members and clear representation of client preferences and requirements	Communicate with the client to discuss iterations of the project to maintain a clear scope of the game	Ari & Arya
R4	Project	Project website not up to date if changes are made to the project	Moderate	Moderate	Author of the deliverable performing a backward data continuity check within the website	Regular progress report checks on any new information requiring links upload to the website	Skylar
R5	Project	Lost/forgotten documentation	Moderate	High	Potential restoration of deleted documents or reversion to previous drafts	Deep inspection of final versions of deliverables and any additional required documents	Skylar & Ari
R6	Technology	Tool/Asset availability (3rd party assets no longer supported, copyright issues, problems embedding incompatible	Low	Moderate	Use Generative AI to produce copyright free assets and use the most popular and best kept up to date tools	Check each time a new asset or tool is used that it is suitable for use in the game	Ben & Lilac

		features etc)					
R7	Technology	Bugs/Errors in the Game	<b>High</b>	<b>Moderate</b>	Regularly test the game during the development process and check for these bugs	Potentially have a person play the game in search of its limitations and potential bugs	Ben & Calum
R8	People	Mistakes in data interpretation between teams within the group	<b>Moderate</b>	<b>Moderate</b>	Ensure consistent and clear communication between all team members	All documentation must be accessible to all members of the team to allow for more feedback	Everyone
R9	Technology	Inconsistency in game versions on GitHub resulting in unaccounted-for branches	<b>Moderate</b>	<b>High</b>	If necessary, reverting to older versions. Otherwise merging the branches into the single newest version	All new versions of the code must be announced and described in detail before being uploaded to GitHub	Ben & Lilac
R10	People	Not meeting the deadlines therefore delaying progress	<b>Moderate</b>	<b>High</b>	Altering initial requirements or rearranging deadlines in a way which allows for more time being spent on a task	Regular progress checks through google sheets containing additional task and deadline information	Everyone
R11	Project	Losing track of documents related to the progress of the project	<b>Low</b>	<b>Low</b>	Keep an organised file structure with support for previous versions	Performing checks on file's locations and versions with additional draft documents included in the same directory	Skylar & Arya

R12	Technology	Misunderstandings regarding game mechanics	<b>Low</b>	<b>Moderate</b>	Performing a large volume of discussions focused on understanding the task and planning the solution ahead of time	Perform checks during various progress milestones to ensure the direction of development is going according to plan	Ben & Lilac
R13	Project	Misunderstandings regarding documentation formatting	<b>Moderate</b>	<b>Moderate</b>	Performing initial visualisation of the deliverable's format	Swapping and checking final versions thoroughly to ensure structural integrity and requirements being met	Everyone
R14	Product	Score system unclear	<b>Low</b>	<b>Moderate</b>	Test scoring mechanics early and communicate how they work	Regularly review scoring outputs at each iteration for consistency with defined rules	Ben & Calum
R15	Product	Maze too easy or challenging	<b>Moderate</b>	<b>Moderate</b>	Test regularly and balance difficulty	Review difficulty metrics each iteration to ensure balanced challenge	Ari & Skylar
R16	Requirements	Presence of violent or inappropriate content	<b>Low</b>	<b>High</b>	Ensure all content is family-friendly and suitable for 16-22 years old	Regularly review content for adherence to age-appropriate standards	Ari & Arya
R17	Product	Unable to pause or exit the game at will, causing accessibility issues or negative user experience	<b>Moderate</b>	<b>High</b>	Implement pause and exit option at any time, and verify they are tested early	Check functionality of pause and exit options throughout development	Ben & Skylar

R18	Requirements	Some features not clearly defined	<b>Moderate</b>	<b>High</b>	Clarify the features before the implementation starts	Review feature definitions before and during implementation to ensure clarity.	Ari & Arya
R19	Product	Objectives are difficult to understand	<b>Moderate</b>	<b>Moderate</b>	Balance the difficulty and provide in-game hints	Test objectives for clarity and adjust hints to support player understanding	Calum & Skylar
R20	Product	Accessibility limitations	<b>Moderate</b>	<b>Moderate</b>	Provide base accessibility features	Regularly check accessibility features are functional and effective	Calum & Lilac
R21	People	Uneven workload causes delays	<b>Moderate</b>	<b>Moderate</b>	Assign tasks equally to team members	Regularly review task distribution to ensure balanced workload among team members	Everyone