

Risk Assessment and Mitigation

“Lucky” Team 13

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Risk Assessment and Mitigation

Risk management process

A risk is anything that could threaten the project and so it is important to identify and manage them. By identifying and managing risks, we are able to monitor and mitigate any known risks. However, an unknown risk is unable to be managed and therefore a proper risk assessment is vital to ensure the project does not fail or is not severely affected.

The risk management process followed by our team while developing our game included the following steps:

Risk identification

Our team's first step consisted of identifying all risks associated with our development. We did this by brainstorming and researching the typical reasons game development fails. In order to identify as many initial risks as possible we discussed all the different sections of the project and what could potentially affect them. We also categorised the risks into where the risk could arise.

Risk Analysis

The next step was to select each risk and then assess the chances of each risk occurring and then the impact the risk would have if it occurred. After the risks have been analysed we began to prioritise tasks based on the risk's likelihood rating.

Risk Planning

After this we began to brainstorm ideas to mitigate the risks. For example if a team member is unavailable we will have made sure at least two people are assigned to a task and therefore it will still be worked on.

We could now create our risk register and as a group we managed to assign more people to certain tasks based on their risks. For example if a task was incredibly important then it should have at least two people assigned to it.

Risk Monitoring

As we develop and continue with the game in order to succeed we will be, and have been, monitoring these risks and updating the register to ensure everything is managed successfully.

Risk Register Format

Category

- Technology - Risks related to software / hardware
- People - Risks related to people within the team
- Requirements - Risks related to the requirements of the product
- Estimation - Risks related to time and resource estimation for the project

Type

- Project - Risks affecting project schedule or resources
- Product - Risks affecting the product quality/completeness
- Business - Risks affecting the organisation procuring/developing the software

Likelihood

- Low - The risk is unlikely to occur
- Moderate - The risk is moderately likely to occur
- High - The risk is likely to occur

Severity

- Low - The risk will have low impact to the project and can easily be mitigated
- Moderate - The risk will have moderate impact to the project
- High - The risk will have a severe impact to the project

Risk Register

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
Technology						
R1	Project	Google Drive could fail / crash	L	H	Create copies of documents on local devices	Alex and Bailey
R2	Project	Project files are lost or are not the most recent version	L	H	Use a version control system and cloud based storage for files. (Github and Google Drive)	Alex and Bailey
R3	Project	Technology compatibility issues such as development applications. Meaning some team members may be limited on the work they can do if their laptop is not working correctly or is not compatible	L	L	Ensure tasks are assigned to those with the means of doing them. Or use software that everyone can access, for example the Google workspace.	Alex and Bailey
R4	Product	The game is not	L	H	Ensure the game's	Alex and Bailey

		playable on most computers due to the majority of players not having powerful pcs			terrain and mechanics can run on average pcs	
R5	Product	The game is not playable due to the operating system	L	H	Continuously test the game on multiple operating systems to ensure it is compatible	Alex and Bailey
R6	Business	The game is incomplete or low quality	L	H	Have good plans and learn from mistakes from previous sprints	Alex and Bailey
R7	Product	The game runs slowly on the client's hardware	M	M	Make sure code is efficient and runs correctly, regardless of the framerate.	Alex and Bailey
R8	Product	Final version of the game has issues due to poor testing	L	H	Have consistent testing every sprint to ensure issues are picked up and looked at during the next sprint	Alex and Bailey
People						
R9	Project	Long sessions of working and pressure to meet deadlines can cause fatigue and result in burnout and causes the project to fall behind	M	M	Ensure the work load is distributed evenly to avoid long sessions of work by assigning multiple people to each task in case a member is unable to work.	Elizabeth
R10	Project	Deadlines and teamwork can cause a mental strain on teammates and some team members may not excel and perform to their ability due to suffering from stress	M	L	Ensure effective communication about stress and work as a team to relieve others when possible.	Elizabeth
R11	Project	Issues may arise with deadlines as real life unscheduled scenarios may arise such as illness	M	M	Have tasks assigned to at least two group members and have code and documentation easy to understand so another team member could continue the work	Elizabeth
R12	Project,	A risk is not identified	M	H	Continue to think about	Elizabeth

	Business	by the team			risks and continuously update the risk register	
R13	Business	The final product is not what the client requested and is not approved by the target audience	L	H	Regular meetings to review requirements and have good communication with our client	Elizabeth
R14	Product	We may not have the programming ability to add some features	M	M	Avoid too many new libraries and assign tasks to group members with most ability and experience	Elizabeth
R15	Product Project	Team members may all have different ideas for the game which could cause conflict	L	M	Have regular meetings to discuss ideas and ensure everyone is on the same page	Elizabeth
R16	Project	People fail to complete their assigned task either due to poor time management or poor team planning	M	H	Have two people working on each task to improve the bus factor	Elizabeth
R17	Project	Lack of communication could lead to inconsistencies in different tasks	M	M	Having regular meetings to review that sprints work and discuss what needs to be completed next	Elizabeth
Requirements						
R18	Project	The main requirements are missed due to focus on other areas of the game	L	H	Have main features scheduled to complete first before focussing on additional features	Yuxin and Chen
R19	Project	The project requirements change	H	M	Having up to date and easy to amend documents and commented code to allow for change	Yuxin and Chen
R20	Product	Misunderstood the requirements	M	H	Have clear requirements and good communication with the client	Yuxin and Chen
R21	Product	The game is not enjoyable and is filled with bugs	L	H	Continuously testing the game with both team members and non team members in the target audience	Yuxin and Chen

R22	Business Product	Bugs may be in the game after release and may require additional work to fix them and could cause upset among customers	M	L	Continuously test the game and fix any bugs as they arise	Yuxin and Chen
R23	Product	Balance between quality, features and time could be miscalculated and result in the game's failure past development	L	H	Ensure the balance is recalculated throughout the project	Yuxin and Chen
R24	Product	Significant features are asked to be removed	L	H	Code the game with as few dependencies as possible so if one feature has to go it will not cause the whole game to fail.	Yuxin and Chen
R25	Product	Inheriting unfixable bugs which could potentially make the game unplayable	M	H	An initial assessment of the game must be made to determine any bugs in order to fix them as soon as possible	Yuxin and Chen
Estimation						
R26	Product	Producing a sub par video game due to time restraints	M	M	Make sure there is extra time between our deadlines and the client's deadline	Elizabeth
R27	Project	The estimated deadlines for tasks are miscalculated	M	M	Make sure there is extra time between our deadlines and the client's deadline	Elizabeth
R28	Product	Some areas of the game are over developed and some are underdeveloped	M	M	Have good planning and time estimation for each task	Elizabeth
R29	Product	Some additional features cannot be added due to time constraints	M	L	Main features will be implemented first and any additional will be completed after	Elizabeth
R30	Product	Inheriting documents that are missing parts from that will require extra time to fix	M	L	Make sure there is extra time available to complete documents	Elizabeth

