Risk Assessment and Mitigation

Cohort 2 Team 5

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Risk management process

For our “escape from uni” game, this document is aimed to help identify and mitigate potential project risks during the process of development. Through anticipating these risks, we can then avoid potential threats to our project success, therefore safeguarding possible problems, project duration, team dynamics and the final product quality.

Our process began when discussing the potential issues that could arise when creating our game during group sessions. We then grouped these issues into three main categories:

- Product (Risks regarding design, gameplay and functionality)
- Technology (Risks associated with software and hardware)
- People (Risks relating to the team, dynamics and availability)

Using our risk categories, we then identified risks that could potentially hinder our project and placed them into our risk register table. In the risk register we created a risk profile, this profile includes a dedicated owner from the team to monitor a selected risk(s), in which we delegated the risks to our team members fairly. As well as this, we measured each risk based on likelihood and severity, a combination of the probability of it occurring during development and the effect this event will have on our project. These now ranked risks, allow us to prioritise avoiding certain risks and plan our response accordingly. We added a mitigation column which provides an action plan to prevent the risk from occurring or minimize the outcome of the risk.

To make sure there is understanding between our team members for the terminology used in the risk register, we specify here:

- ID: The unique identifier for each risk.
- Type: The category the risk falls under.
- Description: A clear explanation of possible risks.
- Likelihood: The probability of this event happening.
    - L (Low): Unlikely to occur.
    - M (Medium): likely to occur.
    - H (High): very likely to occur.
- Severity: The impact this event will have on the final project and its duration
    - L (Low): Minor setback to the project that can easily be fixed.
    - M (Medium): There is an impact on the project's quality and duration, but can be fixed over time.
    - H (High) : Can threaten the project duration and quality majorly, and can threaten core aspects of the project.
- Owner: the team member responsible for monitoring the risk

We have delegated the risk ownership between all of the team members. Since risk management is an ongoing process during project development, each assigned owner is responsible for their risks and should consistently monitor and re-assess their likelihood and severity throughout the weeks and communicate early on to the team if there are signs of a possible risk occurring. This should allow us to solve and prevent risks before they severely affect our project.

Risk Register

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
R1	People	A team member(s) falls ill for a large amount of time.	L	H	Inform the module leader, delegate the missing member(s) work between the rest of the members, and ensure all work is constantly shared in the drive.	Lottie
R2	People	A team member(s) has left the module.	L	H	Talk to the module leader, delegate and distribute missing member(s) tasks among the rest of the team	Mimi
R3	People	Lack of communications between the team member(s)	M	M	Raise the issue with the group during meetings, and have them try to instigate better conversation and communication within the team.	Ruth
R4	People	Unequal workload distribution between team members	M	M	Raise the issue within the team immediately, ensure when initially given tasks that it is fairly shared. Use a Gantt sheet to monitor the distribution of tasks.	Harry
R5	People	Poor time management on tasks	M	M	Refer back to planning and either break down the task between people, or give yourself more time on the gantt chart to complete. Make sure to hold regular meetings to track each other's progress and hold member(s) accountable if it occurs repeatedly.	Tom
R6	People	A fight(s) occurs with fellow team members	L	H	Try to work it out amongst each other. If no change occurs then speak to the team leader/supervisor and re arrange the tasks between them to prevent further interaction.	Stanley
R7	People	A team member(s) consistently doesn’t show up	M	H	Speak to them privately or reach out to them, and if the behaviour continues, discuss as a group, and then talk to	Will

					the module leader.	
R8	People	A team member(s) does not have the necessary skill set for the task required	M	M	Work together in sessions and help share knowledge on the areas the member(s) struggle with. You can also delegate a small task to that member first, or switch tasks.	Lottie
R9	People	A team member(s) utilises an AI engine to aid or do their task for them.	L	H	Make sure to remind team members early on that AI utilisation is not allowed. If found someone is using it go talk to them, if further use bring it up to the module leader.	Mimi
R10	People	A team member(s) underestimated the workload for a given task	M	M	Make sure during project meetings, members keep track of tasks and vocalise early on if struggling with timings. If spoken up about, we will share around the task to help the member(s) struggling.	Ruth
R11	Technology	The game engine is no longer compatible with device(s)	L	H	Early through the project test the build on all the groups laptops to make sure it's compatible frequently. If it is no longer compatible, have alternative engines at the ready.	Tom
R12	Technology	A key file(s) have gotten misplaced or deleted	M	H	Make sure to regularly back up your files and code in a shared backup repository (GitHub).	Harry
R13	Technology	Hardware failure	L	M	Keep all project files and code in GitHub. This will allow all team members access to the project folder from any device.	Will
R14	Project	The gameplay difficulty is too unbalanced for the user.	M	M	Throughout later development of the product conduct regular testing with volunteers. Use the feedback to adjust certain aspects of the game depending on their response.	Stanley
R15	Project	The GUI is too complex so the user	M	M	When designing the GUI, first build a simple interactive user	Lottie

		struggles to navigate the interface.			interface and allow testing. Keep iterating over multiple design rearrangements until content.	
R16	Project	The theme does not revolve around University life	L	H	Within frequent meetings make sure to constantly include the theme idea of "university life" within the game's iteration.	Mimi
R17	Project	The game is not fun and engaging for the user to play	L	M	Make sure to prioritise a fun game. From testing early prototypes make sure when iterating to cut features which are reducing engagement.	Ruth
R18	Project	The interface is not accessible for those who have impairments	M	H	Make sure to consider basic accessibility interfaces, such as using colour-blind friendly colour schemes or other identifiable features to help lead the user through the game.	Will
R19	Project	The game contains multiple bugs which can make the game unplayable	H	H	Make sure to provide time to do testing for the prototype, and iterate testing until we are content with the final product.	Tom
R20	Product	The enemy entity collision does not work with the player character	M	H	Thoroughly test the collision boxes using the game engine debugging tools.	Harry
R21	Product	The user does not understand how to play the game.	M	M	Implement a simple tutorial for the user, which tells the user how to navigate the controls and in game functions.	Lottie
R22	Product	The Hidden events are too hard to find for the user	M	L	If the user struggles, make sure to add subtle cues, audio or visual to hint at the hidden event. Continue to test this throughout the testing phase and iterate from user feedback.	Mimi
R23	Product	The events don't activate or appear to the user	M	H	Throughout testing, make sure to log the event triggers, and see if they can be activated during gameplay.	Tom