Risk assessment and mitigation

<u>Team 10: Hard G For GIFs</u>

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a)

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.

We have chosen to deliver this in a tabular format. There are 6 defined columns for each risk. The first column being each risk's unique ID. The second column is the type of risk. The third column is a brief description of the risk. The fourth column is the likelihood of that risk occurring on the following scale:

● Low - Very unlikely to happen, with a minuscule chance of occurring.
● Medium - It could happen or not, depending on the mitigation taken. ● High - Very large chance of occurring, and common.

The fifth column is the severity of the risk, so how much damage it could cause. This is on a scale of:
- Low - Not much damage, a couple of hours work at most. Not worth reporting
- Medium - A week of work, this could affect internal deadlines. Group members would be informed to recover swiftly.
- High - A large sum of work or all of it is affected. Project deadline is affected. Group members and teaching staff informed to resolve.

The seventh and final column is the ownership of the risk. They will be held 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.

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.

b)

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
1	Project	Loss of work due to corruption or human error	Low	Medium	Frequent creation of backups both internally and externally	All
2	Project	Loss of a team member	Low	High	Have a backup for everybody's role (high bus factor)	All
3	Product	Game Engine limitations	Medium	Medium	Focus on simple mechanics that meet the requirements	All
4	Product and Project	Requirem ent s changes	Low	Medium	Have a flexible code that we can change easily	All
5	Product	Unavailable documentat ion for the libraries	Medium	Low	Use a popular library with lots of tutorials online	All

6	Product	Difficulty in creating graphic assets	Medium	Low	Use simplistic art-style and/or look for assets online	All
7	Product	Difficulty in finding a fitting soundtrack	Low	Low	Settle for non-copyrighted music from online sources	All
8	Project	Github servers become unavailable	Low	High	Store files across a variety of platforms, including google docs and local copies	All
9	Product	Difficulty implementing the project architecture	Low	Medium	Build a clear architecture and help team members to implement the project in a simple and straightforward manner through code reviews	All
10	Product	Player controls don't work as expected	Medium	Medium	Properly test the implemented features	Dragos

11	Product	UI becomes pixelated when scaled up	Medium	Low	Implement the UI using a different format	Sam

12	Product	AI doesn't behave as expected	Medium	Low	Consider every possible scenario and do lots of testing, also getting reviews from other team members	Dragos
13	Product	The game map does not properly fit the game screen	Medium	Low	Properly study and understand the different scales we need to use, based on aspect ratio and resolution	Dragos, Quentin
14	Product	UI fails to react to the events in the game in a timely manner	Low	Low	Collaborate with team members to ensure code is optimized, and use a different format if necessary	Sam
15	Product	Collisions do not work as expected	Medium	Medium	Make sure the physics properties of each body are correct, so the interactions between them don't affect other features	Dragos
16	Product	Transitions between game stages don't work	Medium	Medium	Keep the UI classes and the game classes separate so each feature is independent and merging is easy	Dragos, Sam
17	Product	Boats don't recognise they are outside of the lanes	Low	Medium	Implement an easy way of checking if the boat is still withing the lane	Dragos

		so they don't get penalised			boundaries	

18	Business	Difficulty acquiring the right software to develop the game	Low	Medium	Search around different valid combinations of software that could be used to develop the game	All