Risk Assessment and Mitigation

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The big conundrum with doing a risk assessment is that there are some things that are very risky, however the changes of them happening are very small. For this reason we have decided to rate the risks as both frequency (likelihood) and risk. We hope that by doing this it will provides a bit of context as to how likely the risks are.

As show in the table below, we have will rate each risk with a severity: Low, Moderate, and High. We have given each of these a definition.

Frequency (Likelihood)	**Consequences (Severity)**
L: The risk is rare, and most likely won't occur	L: The effects will be small, and unlikely to affect progress
M: The risk is known to happen, and may occur	M: The effects will be moderate, and could affect progress
H: The risk is common, and will occur at some point	H: The effects will be serious, and will effect or halt progress

We also need an overall risk factor, based on the frequency and consequences.

Frequency vs risk	Low	Moderate	High
Low	Low Risk	Low Risk	Moderate Risk
Moderate	Low Risk	Moderate Risk	High Risk
High	Moderate Risk	High Risk	High Risk

Through the project we will monitor the risks and make sure we are following this assessment. We will review this document roughly halfway through the project in week 5, and discuss any changes that are required.

ID	Type	Description	Likelihood	Severity	Mitigation
R1	Technology	All project resources are stored on GitHub, so any issues with GitHub will prevent us from making progress with the project until the issues are resolved	Low	High	Downloading resources for current tasks will allow us to continue working without GitHub
R2	Technology	All information on project progress is stored on Trello, so any issues with Trello will prevent us from making progress as we won't know what has been completed, what has been started, and what still needs to be started	Low	Moderate	If Trello is down, we can use Discord to update each other on progress
R3	Technology	All group communication is done on Discord, so any issues with Discord will prevent us from keeping each other up to date on what is happening in the project	Low	Low	If Discord is down, we have each other's email addresses and can set up zoom meetings
R4	Technology	All work is done online, so any issues with our internet connections will prevent us from making any progress on our projects. Previously, some of us have reported issues with our internet connections, pertaining to speed and a loss of connection	Moderate	High	If our internet goes down, we can use mobile data for basic communication to decide how to deal with it
R5	Technology	We have a weekly meeting on Zoom, where we can discuss progress, plan our work for the week, and discuss the project with the client	Low	Low	If we lose use of zoom, we can use the voice chat feature on Discord
R6	Technology	As all work is digital, if one of the group members loses use of their computer they won't be able to work on the project	Low	High	If our computers stop working, we can borrow a computer from the library or house mates
R7	Technology	As all game resources are stored online, 2 team members working on the same part of the project at the same time could have negative effects	Moderate	High	We use GitHub to store our resources, which prevents this from happening

R8	People	As not all of us are familiar with the game engine, if those familiar with it are unable to work no progress can be made on the project	Low	High	Those unfamiliar with the game engine can take time to learn to use the game engine
R9	People	As the group members aren't all in the same time zone, the times that we can meet and discuss progress are limited	Moderate	Low	We schedule group meetings at times suitable for everyone
R10	People	A critical member could fall ill (COVID-19 and other medical problems) with work outstanding.	Moderate	Moderate	Make sure that all members are regularly pushing code and documents to Github and the Google Drive.
R11	People	Work is not added to the trello board or other management tools meaning work is missed or duplicated	Low	Moderate	Make sure all work is logged so that we know who is doing what. Make sure we have a clear plan listing who is doing what.
R12	Requirements	The requirements start to creep as we come up with ideas	Low	High	We will make sure to just stick to the features we have got in the requirements documents, and not add new ones until they are completed
R13	Requirements	The customer changes the requirements	Low	High	We will review and requirement changes and how they effect the project. We will try and get a detailed list of requirements from the customer to start with so things are not changing
R14	Requirements	We will not complete all the requirements	Low	Moderate	We review the requirements with the customer and then we will prioritise which requirements are the most needed.
R15	Timescale	We get behind and do not look like we will finish	Low	High	At the review periods if we feel we are behind we, along with input from the customer, will select the requirements that we feel are more important

R16	Timescale	We set unrealistic schedules and deadlines	Low	Low	We will make sure that if we feel a schedule is unrealistic we review it, and see why it is taking longer than we expected.