

We decided to account for risks by creating a table including two key aspects. The first key part is an exploration of the likelihood and severity of the risks which creates a general awareness of them. Colour coding was used because it makes the importance of the factors immediately evident. Once this was completed, we decided the easiest way to ensure all possible risks were addressed was by creating and noting mitigation strategies. We decided to make individuals responsible for different risk factors. This streamlined the risk mitigation process making it effective as it spread out the responsibility across the entire group. Lastly, identifying the risk types made it easier to come up with mitigation strategies as it clarifies the origin of the challenges.

### **Risk types:**

taking into account all different aspects of our project we have distinguished risks into 4 categories

#### **(1) Project:**

The risk that may change the project schedule.

#### **(2) Product:**

The risk that affects the quality or completeness of product.

#### **(3) Requirements:**

Changes to the requirements of the project.

#### **(4) Financial risks:**

Any financial problems that are related to the project.

### **Likelihood:**

The likelihood column is used to determine the possibility of a risk occurring.

#### **(1) L (Low) : highlighted in green**

It rarely happens in the project.

#### **(2) M (Moderate) : highlighted in orange**

It possibly happens in the project.

#### **(3) H (High) : highlighted in red**

It normally happens in the project.

### **Severity :**

The severity column is used to determine the order of severity of risks.

#### **(1) L (Low) : highlighted in green**

It doesn't need a large amount of resources to mitigate the risk.

The effect isn't necessary for the project and product.

#### **(2) M (Moderate) : highlighted in orange**

Risk may affect the quality of the product.

The risk that may change the arrangement of tasks and schedule.

#### **(3) H (High) : highlighted in red**

The quality of the product may significantly decrease.

The risk may cause the project to not be finished on time or significantly delay task completion.

### **Mitigation:**

Mitigation is the description of methods to avoid the risks or reduce the effect of the risks.

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
R1	Project	Team members have health problems that will cause them to not complete their designated task	M	H	(1)Team members should update their situation in time, and the process of his/hers work should be updated in time. Then, separating the rest of the work to other members. (2)If too many members get health problems,we should ask the lecturer to see whether some parts of the projects can be canceled.(If they can't finish their tasks because of health problem)	Everyone is responsible for reporting their own health
R2	Project	Changing tasks between members/ members leaving.	L	M	Each member should be allocated tasks, and these tasks should be signed by their owner name. (1)If any member leaves a task, his/her tasks can be found and allocated to other members easily. If too many members leave, the team should ask the lecturer whether some tasks can be canceled.	Adam
R3	Product	Communication problems between team members.	H	M	Use communication software that is accessible to everyone to help team members communicate for the project.	San
R4	Product	Unclear code between team members	M	M	Team members will use the same coding style to maintain	Armintas

					consistency. Anything that is unclear to the team member should receive clarification from other team members.	
R5	Product	Too many false alarms due to software/hardware/data defects	L	H	Use methods that have less defects to complete the project. If members have any technical problems during the project, it is necessary to communicate with other members. If any problem is not rectified then they must contact a lecturer.	Adam
R6	Product	Changing Game sprites/ issues with game sprites	M	L	Ensure the sprites fit the game and will not cause any problems during the game.	Tudor
R7	Financial risks	Charges on tools that appear free but may be charged after (eg, trials)	L	L	(1)Use more free software and tools to complete the project. (2)Any charge should be divided equally to every team member if necessary.	Anyone introducing tools must ensure that they are free (or affordable).
R8	Requirement	Changes to game rules(adding new rules or changing old rule)	M	M	Communicate with team members regularly to make sure the team is up to date with the current rules and changes to the game.	Adam
R9	Product	Unbalanced performance between different boats. (There are	M	L	To have a high standard of playability. The product should	Liu

		boats that are especially stronger or weaker than other boats.)			be played and tested many times before submission. Ensuring that the game is fair and no point has an extreme advantage to other boats.	
R10	Product	Low frame rate during the game caused by external libraries/tools.	M	L	(1)Optimize the code or the algorithm to prevent waste of resources. (2)Test the game to find bugs that affect the optimisation. Then fix the issues which have been found	Arminta s
R11	Project	Uncompleted tasks by deadline.	L	H	(1) All tasks of the project should be finished and checked by team members before the deadline. (2) use Trello,github,google drive and discord to help team members to record and check the completeness of tasks to prevent uncompleted tasks.	Liu
R12	Project	A member isn't up to date with their task compared to other members and has "fallen behind".	M	M	Use methods like discord and github to help team members to catch up and understand the project progress and communicate with team members to get help. Possibly rearrange work load in order to maximise working efficiency.	Tudor