RISK ASSESSMENT AND MITIGATION

Risk Register

ID	Type	Description	Likelihood	Severity	Avoidance/Mitigation/Contingency Plan(s)	Owner
R1	Project	One or more members of our team are unable to participate	Medium	High	**Mitigation:** Make sure our bus factor stays at least 2 by having at least 2 people with a complete knowledge of any part of the code, documentation and the write up.	Aidan
R2	Product	Use of poor quality Libraries	Low	Medium	**Avoidance:** Perform careful research of third party libraries before implementing them into our code. Ensure libraries are well tested and reasonably popular to minimise risk.	Kevin
R3	Product	Code structure and readability reduce as the project progresses.	Low	High	**Avoidance:** Ensure project architecture is well planned and code is reviewed before the final version is committed. **Mitigation:** Comply with relevant style guides and ensure code is well documented.	Erin
R4	Product	Product is unable to be built/run on the required hardware or Operating Systems	Low	Medium	**Avoidance:** Check with our customer if they have specific requirements for device specification or operating systems the project must be compatible with. **Avoidance:** Periodically review the performance of the project using benchmarking and ensure CI systems attempt to build the project for multiple OS targets.	N/A but if issues does arrive: Erin, Sam
R5	Requirements	Requirements that are written don't correspond to what the customer wants	Medium	High	**Avoidance:** Meet regularly with the customer and specifically discuss the user level requirements with them. Then carefully create the system requirements as a team based on the user requirements that have been gathered.	Zuhur, Ryan, Aidan, Kevin
R6	Requirements	The customer changes the requirements causing us to have to rewrite	Medium	High	**Mitigation:** Ensure that the architecture of the project is modular and when designing it, ensure the possibility of expansion and adding features is maintained.	Zuhur, Ryan, Aidan, Kevin

		large parts of the game, possibly under limited time			**Mitigation:** Use an agile software development methodology, which will allow for flexible response requirements changes late into the project. This encompasses meeting with the customer frequently, which should reduce the number of the changes that arise later on.	
					Contingency: If there is not enough time to make the changes or the changes required are closer to a prior version we should fallback to that prior version of the solution.	
R7	Project	Misalignment between member's strength and role	Low	Medium	**Avoidance:** Early on in the project we should try to determine our team members strengths and assign roles to them that best fit those strengths.	All
					Mitigation: Assigning more than one member to the same role to leverage different skills.	
R8	Require ments	Unclear or ambiguous requirements	Low	High	**Avoidance:** Make sure requirements are carefully written from the start.	Zuhur, Ryan, Aidan, Kevin
					Mitigation: If a team member feels they are ambiguous or unclear, make sure to clarify this with the rest of the team and the customer if necessary.	
R9	Product + Project	Use of tools that are overcomplicate d or only one team member understands	Low	Medium	**Avoidance:** Have discussions between the team about which tools we've used before when choosing one.	All
					Mitigation: If a new tool is chosen and it is complex or some team members are unfamiliar with it, hold a meeting to show all team members the basics.	
R10	Project	Poor time management and missing the deadline	Low	High	**Avoidance:** Prioritise working on the fundamental requirements of the project before spending time on extra features.	All
					Mitigation: Using a gantt chart from the start, allows time buffers between tasks to accommodate sudden events.	

R11	Project	Lack of communication within team causes issues	High	Medium	**Avoidance:** Set up a quick and easy communication system for the team to use.	Erin
					Mitigation: Team members should clarify if they have any questions or misunderstandings.	
R12	Project	Project schedule is not defined or understood.	Medium	High	**Avoidance:** Create a clear project schedule and assign tasks to each team member.	Aidan
					Mitigation: Hold regular meetings with the team to check on task progress and ensure new tasks are set.	
R13	Project	Scope of project increases and results in some requirements not being met in time.	Medium	High	**Avoidance:** Clearly follow the project schedule and ensure that all requirements are first met before extra features are discussed or worked on.	Aidan
R14	Write Up	Parts of the writeup are poorly formatted or hard to understand.	High	Low	**Avoidance:** Keep the format of the writeup segments fairly consistent throughout and make sure the format is easy to understand, e.g. paragraphs should contain sentences of information that links together.	Zuhur
					Mitigation: Ensure that all parts of the writeup are proofread by the writer and at least one other member of the team.	
R15	Project	Implementation falls behind set team deadlines	Medium	Medium	**Avoidance:** Follow agile methodologies with regular progress tracking	Erin, Sam
R16	Project	Misinterpretation of previous team's work	Medium	Medium	**Mitigation:** Communicate any queries with the previous team to clear understanding.	Ryan

R17	Implementation	Loss of files	Medium	High	**Avoidance:** Being careful when moving files and making commitments. **Mitigation:** Using Github to access/rollback to previous iterations of implementation.	Erin, Sam, Jack, Aidan