

ENG1 Team Project Assessment 2

Deliverable 5: Risk Assessment

Team 13 – Team Unlucky

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5. Risk assessment and mitigation

The risks to the project are presented in the table below, with the following information about each one:

- An ID- to identify individual risks
- Category type- helps to read the table quickly and find the specific risks
 - Tools - for risks that could occur from the use of software
 - Requirements - risks that could occur from changes to the customer requirements or the change of the brief
 - Estimation - risks that could occur from bad management estimates that could cause a delay on specific tasks or lead to the failure of the assessment
 - People - risks associates with the people within the team
 - Product - risks related to the assessment product
 - Technology - risks occurring from the software and hardware technologies
- Description- details what the risk is
- Potential consequence- explains what could go wrong and why this risk needs solving
- Monitoring- shows whether the risk is happening, indicating if it is of immediate concern
- Likelihood and severity- allows the team to make a judgement about how much of a priority this risk is in solving or preventing
- Mitigation - details the steps that need to be, or are being taken to prevent the risk from happening.
- Risk Owner - This is the individual or group who is responsible for alleviating the risk.

There is significant detail about the risks to the programming and game itself because each item can affect the overall game, and are distinct issues.

The likelihood and severity of the risks are also included because this tells us which risk to prioritise in mitigating.

A severity colour coding system is set in place as following: Red - High, Yellow - Medium, Green - Low.

Risk Register

ID	Type	Description	Consequences	Monitoring	Likelihood	Severity	Mitigation	Owner	Related requirement
R1	Technology	AI interaction proves infeasible to implement	Opposing ships will behave differently	not currently happening	H	H	Fake/Limited AI via scripted interaction	Roscoe, Ayman	FR_HOSTILE_AI
R2	Product	NPC targeting of player ship not enough or too challenging	Game may not be enjoyable	not currently happening	M	M	Player test gameplay and adjust parameters	Roscoe, Ayman	FR_BULLET_TRAVEL
R3	Technology	AI decision making too slow to be convincing	Game may not be enjoyable	not currently happening	L	M	Fake/Limited AI via scripted interaction	Roscoe, Ayman	FR_MIN_FPS; NFR_AI_LAG
R4	Technology	Physics engine being unstable	Player and projectiles may not interact with the other elements in the program correctly.	not currently happening	M	M	Make it difficult to get into an unstable situation	Everyone	NFR_SHIP_COLLISIONS
R6	Technology	Cost of high res textures cause high loading time	Game may have a large loading time, which may cause the user to think the program is broken	not currently happening	L	L	Minimal resources are loaded (possibly on another thread) or compression used	Adam	FR_VIEWPORT_SCALING
R7	Technology	Large maps and complex algorithms cause low fps	Game is harder to run on low specification computers	not currently happening	M	H	Make sure map size and algorithm complexity is appropriate for all systems	Everyone	FR_MIN_FPS
R8	Technology	Rendering during movement may stutter/lag/flicker	Graphics look slightly worse than they would if you pay close attention	not currently happening	L	L	Issue so minor, no mitigation needed	Everyone	NFR_RENDER_SMOOTHNESS
R9	Tools	Improper use of GitHub tools may lead to disruption	Distruptions could delay the development process and put the team behind schedule	not currently happening	M	M	Make sure everyone working with GitHub is familiar with the tools and their purpose	Roscoe, Ayman, Adam	N/A
R11	Technology	Tile map rounding error causing visual artifacts	The game runs without any errors, but a lot of visual artifacts	not currently happening	H	M	Pad texture atlas that is used for the tile map	Everyone	FR_MIN_FPS
R12	Product	AI not being as advanced as it could be	The AI is either too good or bad. Making the gameplay worse for the user.	not currently happening	M	L	Fake/Limited AI via scripted interaction	Everyone	FR_FRIENDLY_AI; FR_HOSTILE_AI
R14	Estimation	The team misjudges how long different tasks will take	The deadline is missed or the work is of a lower quality	not currently happening	M	H	The team will work together closely to make sure everyone is working at a good speed and encourage others to keep working.	Everyone	N/A
R15	People	Bad team communication	Elements of the project may not be done and others duplicated	not currently happening	M	H	The team will ensure that they update Github issues and communicate their progress regularly via team meetings and Discord	Everyone	N/A
R16	Tools	Various Team Members may not be proficient with Java or Related Frameworks	Development may slow down considerably or work produced may not function correctly	not currently happening	M	H	Teams most proficient coders will take lead of codebase development and other team members research proper techniques or ask for help if they get stuck	Everyone	N/A
R17	Estimation	Team members being unavailable during product creation due to illness/other reasons	Development may slow down considerably and may make other members tasks more difficult	not currently happening	L	M	Have regular meetings to reassign work and pair people to ensure work isn't reliant on one individual	Everyone	N/A
R18	People	Differing opinions lead to conflict	Team cohesion plummets and as a consequence tasks are not done to a standard that fits the project	not currently happening	L	H	Have regular meeting to let everything be done by team consensus. Serious issues can be mitigated by management.	Everyone	N/A
R19	Requirements	Changes being made to the project that do not fit requirements	Deliverables/Code may not meet requirements set out by the customer	not currently happening	L	H	Make sure whole team is clear on requirements. Clear up any ambiguity by meetings with customer	Everyone	N/A
R20	Tools	Loss of code due to host website crashing/unavailability	Development may slow down considerably or work produced may be lost entirely	not currently happening	L	H	Keep local copies of code/Deliverables whenever major changes are made and fall back to these if a catastrophic loss occurs	Everyone	N/A
R21	Product	Major Bugs in the code make the product difficult to develop or use	Product does not meet some user requirements	not currently happening	L	H	Test the code thoroughly and fix any major issues if possible	Adam, Lilly	N/A
R22	Product	If there is a flashing animation for the weather it could cause an epilepsy trigger.	Users with photosensitive epilepsy could suffer if there is flashing in the game	not currently happening	L	H	Ensure that any animations, especially the bad weather do not contain any flashing.	Ayman, Roscoe	NFR_NO_FLASHING
R23	People	Different priority levels due to change of management teams	The new team could have different priorities than the previous team causing issues to be overlooked.	not currently happening	L	M	Ensure good communication between previous team and new team.	Everyone	N/A
R24	Requirements	Previous customer requirements could change due to the additional brief requirements	Could lead to overlooking a previous customer requirement as it wasn't directly spoken to the team.	not currently happening	L	M	Have an extra customer team meeting to ensure customer's requirements have not changed.	Everyone	N/A
R25	People	The customer meeting notes from previous team could be missing important information	The lack of important information could lead to a product that is not as desirable from the customer	not currently happening	L	M	Ensure there is a good communication between the customer and the team.	Everyone	N/A
R26	Tools	Files may get accidentally overwritten by a commit in IntelliJ	Files may be permanently lost if not saved elsewhere	not currently happening	L	M	Ensure there are backup branches available and be extra vigilant when making commits such as by pushing to a new branch	Everyone	N/A
R27	Tools	Github may not accurately reflect progression of project	The accuracy of project progress would become difficult to track	not currently happening	M	L	Keep Github actions updated as and when progress is made on project components	Everyone	N/A
R28	People	Loss of work if a team member works on it on their own computer rather than the drive	This could lead to a loss of time and delay in the overall work process	not currently happening	L	H	The team will write all their files on the google drive or directly upload any files worked outside the drive into the drive.		N/A
R29	People	The team depending on another team member to sent over notes or any research they have worked on	This could delay the rest of the team's work and miss important deadlines	not currently happening	L	H	The team should make sure there is always someone else who is doing the same research or have access to any additional notes in case a member being absent.	Ayman	N/A
R30	Product	New menu screen has too many buttons	Can be disorienting for the user	not currently happening	M	H	Make it obvious as to how to work with the menu	Ayman	
R31	People	Wrong requirements being passed to the team from the previous team	An undesirable product could be built due to miss communication	happening	H	H	Have a customer meeting to confirm all of the requirements	Everyone	N/A