5a. Risk management process justification

During software development, the team made conscious decisions to create a risk management process in order to mitigate the impact of contingencies and allow for the efficient and punctual execution of targets and the ability to hit deadlines. We adopted a four step process: risk identification, risk analysis, risk planning and risk monitoring.

During the risk identification phase, we brainstormed potential risks, and categorised them according to if they were a product or project risk. We then eliminated some of the risks such as “power outages" and “natural disasters” as they had very low probabilities, and the nature of these risks had inherent attributes which meant if they were to occur, the impact of the risk would eclipse the relevance to the project.
At the risk analysis phase, we went through the remaining risks and assigned each with a score for both likelihood, and severity, on a low/moderate/high scale. This helps us understand which risks are imperative to the workflow of the project.
In the risk planning phase we discussed how we would mitigate the impact to the project, if a risk occurred. We assigned a “back up” person to each task, so that if someone fell ill, or was unable to complete the task, then someone would be ready to fulfil the objectives. We all agreed that communication amongst the team was a key strategy when mitigating risk.

Risk monitoring is an important step in the risk management process, we assigned individuals, or groups to specific risks, these people are responsible for checking how likely the risk is to occur during production. It is their job to inform the group so that we can decide as a collective on how best to adjust our development in order to accommodate for the higher chance of risk.

Lastly we formatted the risk register table into seven parts: ID, Type, Description, Likelihood, Severity, Mitigation/Avoidance, and Owner. These titles correspond to the prior mentioned data and decisions described in the risk process steps.

5b. Systematic tabular representation of risks

ID	Type	Description	Likelihood	Severity	Mitigation /Avoidance	Owner
R1	Product	System incapabilities (Java 11)	L	H	Update /install java	Everyone
R2	Product	Library licence changing	L	H	Use open-source and widely used libraries, unlikely to change	Alana
R3	Product	Lacking hardware specs	L	M	Optimise game	Everyone
R4	Product	Misunderstanding requirements	M	M	Regular meetings with Tommy and logging answers	Sam
R5	Product	File corruption	L	H	Version control backups	Branch owner & Faran
R6	Project	One project member dropping out	L	M	Distribute work and use shadows for work	Everyone
R7	Project	Two or more project member dropping out	L	H	Communicate with Tommy and drop requirements where told and redistribute work	Everyone
R8	Project	Version control systems failing	H	M	Roll back versions and use merge error protections/branch protection rules	Faran
R9	Project	Temporary loss of member	H	M	Communicate in advance,	Everyone

		(illness)			and make sure work is covered	
R10	Project	Lack of communication	M	M	Ask for more communication, try to include them more. Ask manager for help	Everyone
R11	Project	Failure to meet deadlines having knock on effects	M	H	Communicate progress	Everyone
R12	Project	Poor coding/bugs	H	L	In-depth debugging, continuous testing. Consistent style among the team. Usage of docstrings/javadoc and in-depth documentation	Branch owner
R13	Project	Poor management	H	M	More evenly share work, to even workloads. Communicate if workload is overbearing	Everyone
R14	Project	Time mismanagement	H	M	Thorough planning and communication. Break work down into simpler tasks	Everyone
R15	Project	Misunderstanding requirements	M	M	Regular meetings with Tommy and logging answers	Everyone
R16	Project	Change in customer requirements	M	M	Regular meetings with Tommy	Alana

R17	Project	Customer delays approval	L	M	Follow-up communication, plan overhead time for delay. Expect delay in response(to an extent)	Everyone
R18	Project	Poor branch management	H	M	Use appropriate branches, clean them and regulate them often so you don’t have problems	Branch owner
R19	Project	Lack of centralisation/accessibility for the group	M	H	Make sure all files are shared. Communicate with peers if files are needed	Alana