Risk Assessment and Mitigation

Eng1 Group 29

Adam Hewlett
Ani Thomas
Dan Kirkpatrick
Dominik Hagowski
Matthew Crompton
Niko Chen

Risk Management

Our Process

We began our risk management process by trying to identify all the possible risks that could potentially arise during the course of our project. To guide us we decided on four different categories to place our risks into (Project, People, Technology, User).

The various risk categories are defined as follows:
Project Risks - Risks that affect the project's schedule or deliverables.
People Risks - Risks that affect our team.
Technology Risks - Risks that may occur due to technical problems.
User Risks - Risks that affect the end user of the game.

We went through every stage of our development process to try and find what could go wrong at each stage. For example, at the start of the project lack of knowledge of the game library is a risk and at the end of the project, the potential that not all requirements are completed is a risk.

We then analysed each risk to both find the likelihood of it occurring and the severity of it if it were to happen. For both we used a Low, Medium and High rating (L,M,H). As the project is small and non-critical the severity rating refers to damage to the project alone.

We used the likelihood ratings to discover what risks were the most likely to occur and then put in place mitigation strategies so that we could reduce this likelihood. We did the same with the severity ratings to see what risks would cause serious problems and then created mitigation strategies to reduce the damage of the risks if they were to occur.

We finally put in place a system to give risks owners so that they could be continuously monitored throughout the project to check if the likelihood or severity changes. Owners would also report on the status of their risks and certain points throughout the process so everyone was aware of their potential.

Risk Register

Our risk register has seven columns (ID, Type, Description, Likelihood, Severity, Mitigation, Ownership). ID gives a unique identification to each risk, Type gives the category of the risk, Description gives a brief overview of the risk, Likelihood and severity give a rating (L,M,H), Mitigation describes how we've tried to reduce the effect of the risks and Ownership gives the person responsible for monitoring the risk.

Risk Register Tabular Presentation

Project Risks

ID	Description	Likelihood	Severity	Mitigation	Ownership
R1	Potential to not have completed all requirements by the deadline date.	L	H	Will keep on track with the project plan and allocate tasks so we stay on track to meet the deadline.	Dan
R2	Lack of experience/knowledge with game library (libGdx)	H	L	Take time to learn the software and understand how to use it before we start to develop the game.	Matt
R3	Project brief is not fully understand/ room for interpretation	M	M	Have a customer meeting to get a better understanding of the needs of the customer and what we are expected to deliver.	Dan
R4	Using Software correctly (not violating licensing)	L	M	Read the softwares terms and use it appropriately.	Dominik
R5	Deliverables may not of been fully completed to the brief requirements	M	M	When nearing the end of completion, check through the deliverables and add any additional information that may have been missed.	Adam & Dan

People Risks

ID	Description	Likelihood	Severity	Mitigation	Ownership
R6	Team members missing sessions due to illness/prior commitments.	M	L	Tasks allocated to reduce impact if someone can't be there in person. Communication online (discord) reduces impact.	Adam
R7	Potential for lack of communication	M	H	Keep in touch with regular meetings and online (discord)	Dan
R8	Team members may not be working to their full potential	M	M	Assign tasks to team members, and check up on them to ensure the work is being done appropriately.	Ani

R9	Task monitoring may not be completed appropriately	L	L	Ensure tasks are written down and tracked clearly so team members don't get confused.	Dominik

Technology Risks

ID	Description	Likelihood	Severity	Mitigation	Ownership
R10	Loss of progress/data due to computer malfunction.	L	H	Work uploaded to GitHub and Cloud to prevent any setbacks in the case of a malfunction.	Niko
R11	The game may not perform the same on different operating systems (windows/linux).	L	M	Will have to develop for both operating systems and test on both.	Dominik
R12	The game may become too demanding to run on lower spec systems	L	M	Test the game on various systems, if it becomes too demanding then optimise the code.	Dominik
R13	Different display sizes (laptop/TV) could cause graphics to worsen and the game not look good.	M	L	Use scalable graphics and test on different size displays to prevent.	Adam
R14	Merging of branches on GitHub may not be completed correctly	L	H	Ensure great care is taken when merging branches into the main to ensure the game doesn’t become unusable.	Dominik

User Risks

ID	Description	Likelihood	Severity	Mitigation	Ownership
R15	Users may struggle to complete the game if it is too difficult	L	L	Have multiple users test the game to ensure it is a suitable difficulty whilst still being enjoyable for all.	Niko

R16	The users may not understand the controls of the game	L	L	Get multiple users to test the game and see how fast it takes for them to learn the controls.	Ani
R17	The users may get lost in menus	L	L	Ensure menus are clear and easy to navigate through to prevent confusion.	Matt