Risk Assessment and Mitigation

Team 16

CatepillaDevelopment

Yousif Al-Rufaye
Joe Fuller
William Gracie-Langrick
Jack Hardy
Bailey Uniacke
Ben Young

Risk Assessment and Mitigation

Risk Management Process

A risk is anything that could threaten the project and so it is important to identify and manage them. By identifying and managing risks, we are able to monitor and mitigate any known risks. However, an unknown risk is unable to be managed and therefore a proper risk assessment is vital to ensure the project does not fail or is not severely affected. During our first meeting we discussed the potential risks to the project and decided we would create an initial document and then continuously update it to ensure all risks were identified and mitigated. To do this we followed the risk management process:

Risk Identification: In order to identify as many initial risks as possible we discussed all the different sections of the project and what could potentially affect them. We also categorised the risks into where the risk could arise.

Risk Analysis: We would then analyse the risks we determined and decided on their likelihood, consequences and severity.

Risk Planning: To minimise the impact on the project we needed to find ways of mitigating the risks. For example if a team member is unavailable we will have made sure at least two people are assigned to a task and therefore it will still be worked on.

Risk Monitoring: During the course of the project we will monitor all of the risks, reviewing their likelihood, severity and mitigation. This way we can determine risks that are becoming more severe or ones that are extremely unlikely to happen.

We stored all of our risks in a risk register consisting of a table which displays all the information of the risk: ID, Type, Description, Likelihood, Severity, Mitigation and Owner. Below is additional information as to how we have structured our risk register:

Category
- Technology - Risks related to software / hardware
- People - Risks related to people within the team
- Requirements - Risks related to the requirements of the product
- Estimation - Risks related to time and resource estimation for the project

Type
- Project - Risks affecting project schedule or resources
- Product - Risks affecting the product quality/completeness
- Business - Risks affecting the organisation procuring/developing the software

Likelihood
- Low - The risk is unlikely to occur
- Moderate - The risk is moderately likely to occur
- High - The risk is likely to occur

Severity
- Low - The risk will have low impact to the project and can easily be mitigated
- Moderate -The risk will have moderate impact to the project
- High - The risk will have a severe impact on the project

Risk Register

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
R1	Project	Google Drive could fail / crash	L	H	Create copies of documents on local devices	**Joe**
R2	Project	Project files are lost or are not the most recent version	L	H	Use a version control system and cloud based storage for files. (Github and Google Drive)	**Jack**
R3	Business	The game is incomplete or low quality	L	H	Have good plans and learn from mistakes from previous sprints	**Jack**
R4	Product	The game runs slowly on the client's hardware	M	M	Make sure code is efficient and runs correctly, regardless of the framerate.	**Jack**
R5	Product	Final version of the game has issues due to poor testing	L	H	Have consistent testing every sprint to ensure issues are picked up and looked at during the next sprint	**William**
R6	Product	The game is unable to be compiled	L	M	Try compiling on different machines or request another team member for help	**Jack**
R7	Project	People fail to complete their assigned task either due to poor time management or poor team planning	M	H	Have two people working on each task to improve the bus factor	**Jack**

R8	Project	Lack of communication could lead to inconsistencies in different tasks	M	M	Having regular meetings to review that sprints work and discuss what needs to be completed next	**Jack**
R9	Project	A team member becomes unavailable temporarily or permanently	M	M	Have tasks assigned to at least two group members and have code and documentation easy to understand so another team member could continue the work	**Jack**
R10	Project	Team members cannot attend all meetings due to personal activities	H	M	Make sure we make use of the timetabled practicals and make notes of what was discussed and what needs to be done.	**Jack**
R11	Project, Business	A risk is not identified by the team	L	H	Continue to think about risks and continuously update the risk register	**Joe**
R12	Business	The final product is not what the client requested and is not approved by the target audience	L	H	Regular meetings to review requirements and have good communication with our client	**Bailey**
R13	Product	We may not have the programming ability to add some features	M	M	Avoid too many new libraries and assign tasks to group members with most ability and experience	**Jack**
R14	Project	The main requirements are missed due	L	H	Have main features scheduled to	**Bailey**

		to focus on other areas of the game			complete first before focussing on additional features	
R15	Project	The project requirements change	**H**	**L**	Having up to date and easy to amend documents and commented code to allow for change	**Bailey**
R16	Product	Misunderstood the requirements	**L**	**H**	Have clear requirements and good communication with the client	**Bailey**
R17	Product	Failure to make the game enjoyable	**L**	**H**	Continuously testing the game with both team members and non team members in the target audience	**Jack**
R18	Product	Significant features are asked to be removed	**L**	**H**	Code the game with as few dependencies as possible so if one feature has to go it will not cause the whole game to fail.	**Jack**
R19	Project	The estimated deadlines for tasks are miscalculated	**M**	**M**	Make sure there is extra time between our deadlines and the client's deadline	**Jack**
R20	Product	Some areas of the game are over developed and some are underdeveloped	**M**	**M**	Have good planning and time estimation for each task	**Jack**
R21	Product	Some additional features cannot be added due to time constraints	**H**	**L**	Main features will be implemented first and any additional will be completed after	**Jack**

R1-R6 - Technology

R7 - R13 - People

R14 - R18 - Requirements

R19 - R21 - Estimation