Risk Assessment and Mitigation

Group Number: Cohort 2 Team 7

Group Name: pickNmix

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Risk Management Process

With the purpose of effectively managing the risk, our team implemented a systematic risk management process which is composed of four stages: Risk identification, Risk Analysis, Risk planning and Risk Monitoring. Through this approach, we made sure that risks were proactively handled by reducing the potential interruptions. The first step in our risk management process was the risk identification. We discovered the potential risks which can arise during our software development through helding the team brainstorming by covering almost every category including technology, people, requirements and estimation. In order to focus on more significant risks, low-probability and minor consequences were excluded from our potential risks. After identifying the risks, each of them was assigned to their respective likelihood and severity by making team judgement through an engaging team meeting. With the help of that analysis, our team was able to concentrate on high-likelihood, high-severity risks that might have a significant influence on the project's progress. After analysing the risks, we tried to develop the ways that can handle our identified risks. We carefully chose the tools which are suitable for all members to develop the game. Then, we try to split the tasks and assign the tasks to the members. Moreover, we also assigned the backup member to do that task if the assigned one failed to complete the tasks. For mitigation strategies, we used google docs to write down the things as internal documentation and discord channel to communicate with the team members about the progress of the project. Additionally, we also tried to create the backup file in order to prevent losing the important files which are related to the project. We implemented continuous risk monitoring in the last stage, assigning team members to certain risks so they could periodically reevaluate their likelihood and severity. On top of that, we also made a rule to report on the status of the risk in order to know what is happening and prevent it from massively affecting the project.

For the risk register, our team used the table with seven columns named ID, Type, Description, Likelihood, Severity, Mitigation and Owner. The first column ID is a simple unique identification for every risk in order to easily distinguish one from others. We put a second column called Type in order to help us to know which risk is related to which categories. The third column is the brief description of each risk to deliver a better understanding for every team member. That column is put in the table because the clearer vision on the risk can assist us to effectively handle them. The other column, Likelihood, represents the probability of arising that risk and all likelihoods will be divided into three types: low, moderate and high depending on their chances of happening. Severity is for the level of influence which the risk can have on our project. Similarly to likelihood, there are also three levels of severity called low, moderate and high, and they show us how significantly each risk can have an impact on the project. The fifth column called Mitigation is the description of the way that our team can use to mitigate the risk during our project. Lastly, the Owner column shows who is related to that risk and this column helps us to assign the risk to the related team member for analysing and reporting risk throughout the project development. Our team chose that format for the risk register of our project because that format includes the essential column which can provide the vital information that every member of our team should know about risk management. That format was also really useful for us to successfully manage the potential risks of our project.

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
R1	Project	Tight academic deadlines limit for thorough development and testing	H	H	Create a detailed plan with milestones to ensure consistent progress.	All
R2	Business	Team members are absent during important times.	M	H	Have a knowledge-sharing culture and make tasks and dependencies transparent.	All
R3	Project	Misunderstanding due to lack of formal documentation	M	H	Use clear documentation, maintain a project log of activities, and meeting notes	All
R4	Product	Requirements misinterpretation leads to features that do not meet customer expectations	L	H	Clarify requirements in writing and negotiate regularly with the customer (Lecturer)	Sameer, Phyo
R5	Product	Potential feature extension cannot be done because of poor initial architectural design.	M	M	Consider scalability while designing the architecture and organise the code to allow for adding features	David
R6	Project	Dependency on individual team member for a specific task	H	H	Have backup team members for the tasks to do if that assigned one fails to do it	All

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
R7	Project	Lack of familiarity with the version control system (e.g Git) could lead to code conflicts	H	H	Learn on how to use Git and Github	Alex, Harry
R8	Product	Inability to implement some features due to the skill gaps with programming	M	M	Learn the required skills for the development and seek help from the lecturers	Alex, Harry
R9	Product and project	Overlooking essential requirements from the product brief and missing the important features	L	H	Look thoroughly the product brief and make notes about the essential requirements for the important features	Sameer, Phyo
R10	Project	Team members accidently overwrites each other's work because of the unfamiliarity with the shared environment	M	H	Make sure to have backups and make rules for the code editing	All
R11	Product and project	Loss of data related to the project due to the unexpected system errors	M	H	Make sure to have an essential backup for the important data related to the project	All
R12	Project	Poor initial project timeline plan cause the major delays	L	M	Make a thorough schedule, then review it regularly and make adjustments depending on	David

					team's progress	
R13	Project	Underestimate some potential risk that can arise during the project development and they cause the delays	M	H	Carefully think about all the risk can have significant impact on the project progress	Phillips
R14	Product	The game does not respond actively during the high activity moments and it make the player frustrated	L	M	Test the game and the UI performance	Alex, Harry
R15	Product	The student satisfaction algorithm fails to provide the correct student satisfaction numbers to the player.	L	M	Test this algorithm again and again in order to be sure that algorithm is working properly	Alex, Harry
R16	Business	Insufficient task tracking and communication causes progress delay	H	M	Communicate regularly with team members through team meetings or online to report each other's progress to the others.	David
R17	Project	Ambiguity in game requirements causes confusion in feature development	H	H	Document the requirements clearly and always check them with product brief	Sameer, Phyo