Cohort 3 - Group 22: The Wafflers

Eng1 Assessment 2

Risk Assessment and Mitigation

Team Members:

Tunahan Sisman
Yousef Omar
Merrill Davis
Tom comrie
Rohan Sandhu
Cameron Pounder
Daniel Redshaw

The risk management process followed by the team is a structured approach to identify, analyse, assess, and mitigate risks that could potentially impact our projects objectives. This can be achieved through literature review and regular discussion amongst the team. This approach ensures we address any potential risks, in all relevant categories, before they become significant problems which overall reduce the likelihood of project delays. These categories included: project risks that affect scheduling and resources, product risks that affect product quality or completeness, technological risks caused by hardware or software issues, and business risks that affect stakeholders and the organisation involved in the project's development. More accurate risk categorisation makes the register easier to navigate and reference with precision and efficiency. This approach ensures that no potential risk is overlooked and reduces the probability of failure to meet the requirements/quality standards.

For each risk identified, likelihood they would happen was determined and ranked on a scale of low to high. From there the severity of the risks was also looked at and ranked using the same scale, so that the risk register is easy to follow and refer back to during the project. The risks were prioritised, meaning the risks that were given a high severity were of high priority. This focused our mitigation to the risks that pose the biggest threat to the project's success, ensuring efficient use of resources by addressing the most critical risks first. This was important and ensured our constant awareness of prominent risks and mitigate where consequences are probable.

For every risk, strategies to mitigate them were considered. This includes strategies to reduce the likelihood of the risk happening or could lessen the impact on the project if a risk occurs. One such strategy is eliminating work or tasks that are dependent on a single team member. Without such dependencies, the workflow can be maintained despite an individual member's availability. Another strategy is maintaining a close team working environment; thorough and frequent communication ensures a mutual awareness of the project status and potential risks, and increased likelihood they will be mitigated before they pose consequences. Internal documentation is also a vital practice. Useful and complete code commenting, for example, reduces product risks during Implementation. Finally, redundancy measures are in place to prevent large setbacks due to lost documents, etc. that were stored without backup on a single machine. Overall, by planning mitigation strategies, we can minimise potential risks to the project and reduce their likelihood and severity.

The project is continuously monitored for new risks that can appear and the effectiveness of our mitigation strategies. This allows for adjustments to the mitigation strategies whenever necessary to handle the project and ensure it remains on track despite any risks we might encounter. The team's risk register is a spreadsheet which captures all identified risks, the likelihood, severity and mitigation plans in a structured format. This format ensures us that all relevant information is readily accessible which overall facilitates effective risk management throughout the lifecycle of the project.

ID	Type	Description	Likelihood	Severity	Mitigation	Owner	Risk Status
R1	Technology	Libraries are defective/faulty	M	M	Check that the libraries work prior to use, have a backup	Tom	Prior to starting, check made. Backups of the code at regular intervals
R2	Project	Time- tasks take longer than expected to complete	M	M	Overestimate time needed to complete a task to give more time to do it or use gantt charts	Tunahan	Gantt charts shows we have enough time to complete each task
R3	Product	Technical issues eg. bugs	H	L	Test the game frequently, documentation	Rohan & Merrill	Before each new commit is made a small test is run, docstrings for each method written
R4	Project	Losing a team member	L	L	Having at least 2 people on every section	Cameron	More than one person is working on each section
R5	Technology	System Compatibility Issues	L	H	Check before starting to code the specifications	Rohan & Merrill	Used gradle, deploys to all systems required (windows+arch linux with X11 tested)
R6	Project	Poor communication among team	H	M	Have regular meetings with the team	Yousef	Weekly meetings minimum
R7	Project	Not sufficent communication with stakeholders	L	H	Ensure at least one requirements elicitation interview is had	Team	Meeting with customer had on the 27th feb
R8	Business	Inadequate requirements gathering	M	H	Review Requirements before continuing	Daniel	In a meeting, everyone collaborated on the finished requirements document
R9	Project	Lack of planning	M	M	Ensure a plan is made before starting each mini-project	Tom	For each meeting, a small plan is made

R10	Technology	Data loss/ corruption of some of the source code	L	H	Back up code regularly	Rohan & Merrill	Is saved to a different branch in Github and created local backups
R11	Product	Over Engineering/ attempting to do too much	L	M	Have a base level of what is required and fulfil that, then look to do more if possible	Rohan & Merrill	All functions are completed before starting the appearances are coded
R12	Project	Poor documentation	M	L	Ensure everything is documented and easy to understand	Daniel	Javadoc used to explain code, all documents stored where everyone can access
R13	Business	Ambiguity on requirements	M	M	If the customer is ambiguous, ask follow up questions, otherwise make a decision as a team	Yousef	Meeting with customer had on 27th Feb
R14	Project	Team Burnout	M	M	Split the workload evenly and equally	Team	As a team assigned workloads, ensuring even split of work
R15	Project	Dependence on one individual	L	H	Ensure everyone is doing a role that has been assigned to them	Yousef	Gantt chart shows what everyone is working on, for that week
R16	Project	Insufficient detail in architecture	M	M	Ensure that the diagrams are detailed enough for all to understand	Daniel	In a meeting, everyone looked at the finished diagrams to ensure understanding
R17	Project	Physical Resources could be lost	H	M	Using online resources and share them with everyone	Tunahan	Backups made
R18	Project	Failure to foresee all the risks	H	L	Attempting as much as possible to try and foresee issues	Cameron	As a team went through to try and think of other risks

R19	Product	Not meeting enough of the product requirements	M	H	When coding the game, focus on ensuring that the requirements are completed first	Rohan & Merrill	The requirements were met before further development
R20	Business	The game requirements are misunderstood	M	H	Making sure all our questions are answered and clarified in the customer meeting	Tunahan	Everyone is agreed on the requirements after the meeting, no follow up questions needed
R21	Product	The deliverables are corrupted	L	H	Ensure multiple copies of deliverables are backed-up and stored on different machines.	Cameron	Everyone made copies of deliverables on their own devices.
R22	Technology	The website does not function	L	H	Test the website multiple times and check that each required function is there. e.g. links & photos	Tom	The website has been tested on multiple different browsers
R23	Project	Group member(s) sabotages the work done	L	H	Working collaboratively in a friendly manner to dispel the potential motivation of a saboteur, having a backup	Team	In regular team meeting, ensuring that everyone is happy with the project