Risk Assessment and Mitigation

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1.1 Risk Assessment Process

The risk management process followed by our team is a structured approach to risk identification, assessment, mitigation and monitoring throughout the lifecycle of the project.

We began the project with an initial meeting to identify general risks that we may encounter when planning and modelling the project. These include risks associated with forming the team, deciding on the team structure and holding the first stakeholder meeting.

As the project progressed, we met weekly to discuss progress and identify emerging risks that became apparent. We then updated our risk register, including a date of identification and assigning a team member as the ‘Owner’ to monitor this risk as the project continued.

By assessing the project in an iterative manner, we were able to identify new risks as they emerged from unforeseen circumstances and activities. For example, it was not until week 3 that we first encountered an issue with merging errors on GitHub - at this point, it was added to the risk register so that we could monitor the likelihood of the same issue happening again.

Similarly, in the final two weeks of the project we discussed and monitored risks related to completing the deliverables on time, and the submission of these files going smoothly. We delegated the task of submission to a single team member (Hannah) with a secondary team member (Ben) able to submit the project if errors are encountered.

1.2 Format of the Risk Register

Our risk register is presented in a tabular format below, with a Risk ID, Type (project, product or technology), Description, Mitigation steps and a named Owner. Collaboratively, we then assessed each risk and assigned likelihood and severity ratings, according to the threat that the risk posed to the progress of our project. We kept this rating system simple, using categories low (L), medium (M) and high (H) to quantify each property. Additionally, we colour-coded the table accordingly to give an overview of the risk weighting.

This format is ideal for our project as it allows us to track the progression of risks by the date on which they were identified. This helps us to select the correct mitigation strategy for each type of risk, as well as delegate the monitoring of each risk to the relevant team member.

The risk register is available to all team members and stakeholders, ensuring transparency and accountability. Should an identified risk develop further, any member of the team should contact the named owner to implement mitigation and recovery steps.

2.1 Risk Register

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
Date: 23/02/2024						
R1	Project	Members of the group missing from meetings	L	M	Ask someone to chase them up and make sure another member is able to cover their work.	Praj
R2	Product	Someone's code gets corrupted and they lose their files	M	H	Use GitHub to back up and store code so individual crashes don't affect the project.	Oliver
R3	Project	Dependency management, code becomes too dependant on external libraries and apis	L	M	Version control, try not to make the code fully dependant on the libraries	All
R4	Technology	Incompatible software on different members individual systems	L	M	Utilise software that every member is able to consistently access	All
R5	Project	Scope creep, too many ideas are introduced to the project making it unreasonable	L	L	Stick to the specific requirements the project needs and only add extras once the previous requirements have been met	All
R6	Project	A member dropping out and leaving the group	H	H	Inquire about introducing a new member and allocate their work	All
Date: 28/02/2024						
R7	Project	Merging using GitHub causes errors or corruption in the main branch.	M	M	Ensure everyone pulls before pushing changes.. Understand the rollback process to recover from errors.	All
Date: 08/03/2024						
R8	Project	Limited feedback from stakeholders can result in a product that does not meet user expectations	L	L	Make sure in client meeting to ask specific and important questions that provide useful answers. Follow up with more client meetings if necessary.	Praj

R9	Project	Not adhering to regulatory requirements can lead to legal issues and project setbacks.	L	H	Ensure not to use any tools such as AI in order to complete work, ensure asset packs are suitably licensed.	All
R10	Technology	Failure to address security concerns can lead to data breaches or compromise the integrity of the software.	L	H	Ensure only group members have access to resources such as github.	Oliver
R11	Project	Ineffective communication can lead to misunderstandings, resulting in errors or rework.	H	M	Make sure group communication remains active through discord, so that collaboration is effective and consistent. Schedule biweekly in-person meetings.	All
R12	Project	Ensure that all deadlines for producing the product are meant and make sure that completion of documentation is completed on time.	M	H	Scheduling management between the group using a gantt chart and effective group communication for work delegation	George
R13	Technology	The project may involve technologies or concepts that the team is unfamiliar with, leading to delays and errors.	M	M	Make sure that any new software that is used by the group is shared and explained so that all members are able to utilise it.	All
R14	Project	Key person dependency, if specific team members possess critical knowledge and skills, their absence can be a significant risk.	L	M	Make sure that all work is evenly spread and each area has a secondary person who is able to complete that work.	All
R15	Product	Insufficient testing can result in undetected bugs, affecting the software's reliability and quality.	M	H	Implementation of unit tests ensures the code is fully functional and debugged	All
R16	Project	Poor team dynamics: Conflicts, lack of collaboration, or a weak team culture can negatively impact productivity and morale.	M	L	All conflicts should be decided in a mature manner and if a solution cannot be found then, the seminar leader will be used to help sort out problems.	All

Date: 15/03/2024						
R17	Project	Not finishing the code in time for the deadline.	M	H	Chase up any unfinished work in the week leading up to the deadline.	All
R18	Project	Not finishing the documentation in time for the deadline.	M	H	Chase up any unfinished work in the week leading up to the deadline.	All
R19	Product	Code doesn't build properly when preparing for submission.	L	H	Test the build process at intervals before the final deadline to ensure that we understand and can complete the process without errors.	Oliver
R20	Project	Unable to submit files due to Internet/server issues.	L	H	Prepare and submit the files as early as possible, so that errors can be handled before the deadline.	Rafael
R21	Project	New requirements too difficult to embed into existing code	M	M	Refactor parts of code to allow for feature implementation.	All
R22	Technology	Testing framework cannot be embedded into existing code	M	M	Refactor parts of code to allow for test hooks.	Denys