D5 Risk Assessment

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D5a - Risk Management Process

To ensure the team can effectively manage unexpected risks and mitigate their potential effects, we will follow the strategy outlined below.

Identify - Utilising the risk register:

- Assign every risk an ID.
- List potential risks - Issues that could potentially impact the project.
- Categorising the risk for organisational purposes. Types of risk:
    - *Project:* affect project schedule of resources
    - *Product:* Affect product quality/completeness - flaky libraries, tool bugs
    - *Product and Project:* Requirement errors and changes, specification delays
    - *Business:* Affect the organisation procuring/developing the software
- Identifying the level of impact it will have on the project, to determine priority.
- Providing a brief impact description for other members to utilise.
- Listing the members involved in the risk so other members know which part of the project may be affected.
- A brief description of ways to mitigate the risk at hand.

Analyse:

- Likelihood of occurring - improved planning, assigned in the risk register.
- Highlighted the potential consequences that the risk may cause with the group.
- Could the risk have been prevented? If so, for future tasks, take into consideration how this can be done for analogous risks.

Plan:

- Consider the task roles given to each member, and how secondaries can assist
- Organisation - Keep the team informed of who will take control of the risk, how they will do so.

Action:

- Once all the above has been identified and managed, begin reversing the issue, whilst simultaneously updating all shared information for the team to also ensure the risk has been averted.
- Assess the action during in-person team meetings to receive feedback, as well as any solutions that may be easier to implement or more efficient.

Monitor:

- Continue to oversee the risk that occurred using tools such as the Gantt chart/Backlog on GitHub.
- Just like the in ‘analyse’ section, if any other risks become apparent whilst amending the previous risk, immediately add it to the risk register and repeat all previous steps.

By following this risk management process, we will mitigate any potential risks for our team. The use of the risk register means that all members of our team understand what they are expected to do when certain things happen and allows the project to carry on as smoothly as possible. By analysing and planning in advance, we can deal with risks efficiently and therefore minimise their overall long-term impact on our project. The constant monitoring of the risks will also allow our actions to be as effective and realistic as possible as our priorities may change throughout the project.

D5b - Risk Register

ID	Risk description	Risk category	Impact level	Impact description	Likelihood	Member(s)	Mitigation
R1	Timescales	Product and project	5 - High	Meeting the deadlines of all tasks within the project is vital - as failure to do so would lead to reduced marks.	2 - Relatively low	Any member of the team	Keep up the standard of organisation and communication throughout the entire project, e.g. if someone is falling behind on a task - let the sub-members know and also keep a log of it in GitHub.
R2	General illnesses leading to team members not being able to complete work temporarily or attend meetings	Business	4 - Relatively high	Team members may become unable to complete work if they become ill and other parts of the project may then become delayed.	2 - Relatively low	The secondaries of the sub-team	Have secondary team members assigned to each task so that if the primary becomes unwell then the secondary can carry on. Minutes are also taken in all meetings to ensure that any missing members are kept up to date.
R3	Staff availability	Project	2 - Relatively low	Unlikely case that the team needs important questions answering as soon as possible and staff are unavailable due to circumstances such as illness.	1 - Low	The secondaries of the sub-team	Don't leave any burning questions to the day of meetings with the staff, either Email earlier to get an idea of how to approach the task if it's urgent or, if they are unavailable, either make a work-around or wait until the next meeting.
R4	Hardware problems like personal laptops failing	Product	4 - Relatively high	Will mean that the team member will not be able to	1 - Low	Any member of the team	Ensure all work is uploaded to the centralised shared Google Drive and

				work when at home and may be less contactable.			GitHub so that work can be continued by other members of the team. If the problem cannot be solved quickly then consider renting a university laptop and changing meeting rooms to accommodate the possible use of university PCs.
R5	Software problems like IDE's not working as expected	Product	3 - Moderate	Could make collaboration when coding difficult if code is not transferring easily.	2 - Relatively low	Any member of the team	Ensure all members of the implementation team are familiar with the IDE being used and have the most up to date version. We have also picked an IDE with a large community so there are plenty of resources online to aid us.
R6	Teams members may not complete tasks as expected	Business	3 - Moderate	Team members may not complete assigned tasks by the date expected or to the quality required.	2 - Relatively low	All members of the team	All tasks are on a centralised Kanban so we can all see what tasks we are expected to complete. There is also a review system so each task must be reviewed by another member of the team to ensure high quality work.
R7	A team member becomes unavailable and was the sole author on a piece of code	Product	4 - Relatively high	If a team member becomes unavailable and they are the only person who understands where the implementation	2 - Relatively low	The other primary on implementation and the associated secondaries	All pull requests are reviewed by another member of the implementation team so there will always be another member of the team who is aware of where the code is up to and what

				is up to then the whole project will be delayed as the rest of the team figure out what to do next.			needs to be completed next.