Risk assessment and mitigation

Group 2 - The Debug Thugs

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Risk Assessment Management

As a team we have followed a 5-step risk management process:

1) ***Identifying the risk*** - this could relate to any single part of the project. In our first group meeting we held an open discussion so we could collect as many risk possibilities as we could.
2) ***Analysing the risk*** - most importantly this involved asking how this risk would disrupt the group. We discussed how likely this risk was over the course of the project and how severe the repercussions would be on our progress.
3) ***Evaluating the risk*** - using a scale we put a qualitative value to each risk for likelihood and severity.
4) ***Mitigating the risk*** - this involved discussing how we could lower the chances of each risk happening, and if it did how we could resolve it efficiently and effectively.
5) ***Assigning an owner to the risk*** - it was important we assigned a team member to 'look after' each risk to allow for regularly reviewing.

Using these five steps, we have created a risk register format to visualize everything discussed and ensure the best chances for group success moving forward. For the risk register format we have made a shared document to continually review and assess the risks at hand for our project. We have used the following fields to do this:

- ***ID*** - Unique to each risk, for quick identification
- ***Type*** - Does the risk relate to the product, the team, or the project as a whole?
- ***Description*** - Basic outline of the risk and how it will affect our progress
- ***Likelihood*** - Ranked low, medium, or high, how likely is it this risk will happen?
- ***Severity*** - Ranked low, medium, or high, if the risk does happen how seriously will this affect our progress?
- ***Mitigation*** - What are the steps we can take to reduce the likelihood of the risk occurring?
- ***Owner*** - Who is in charge of reviewing the risk and adjusting likelihood/severity if necessary?

Throughout the project, we will aim to hold weekly risk check-in meetings, updating the risk table regularly. By assigning team members to a risk, we are guaranteeing that risks will be constantly monitored. In this document we will create a section for 'risk reviews of note' so every team member is aware of the current situation. This is also important as we are sure to encounter unknown risks that 'reveal' themselves throughout the project. We will make sure that there is no single point of failure, as no one in the team should feel singled out. It's important we do not have any important documents on just one team member's laptop, for risk something could be lost or a file could be corrupted.

Risk Register [1]

ID	Type	Description	Likelihood	Severity	Mitigation	Owner

R1	Product	The customer may not be happy with our game progress, requirements can change.	**M**	**H**	Ensure that we are receiving feedback from the customer regularly so if there are any issues they can be quickly resolved by the team. Everyone needs to be up to date on our requirements so we are all at hand to answer questions from the customer.	Rosie
R2	Product	Software modules that let us down are a likely possibility. Libraries may not work as intended or have unreliable network calls.	**M**	**M**	Ensure we have valid backup options for each library or piece of software we use.	Rosie
R3	Product	Lack of communication between team members could lead to the loss of some code if two people are making changes at the same time.	**M**	**H**	We also must regularly save any code (in the google drive) so if we do need to change something, our code can be transferred easily. Using version control on github to avoid losing progress is a good idea to allow us multiple copies of code and general documentation.	Rosie
R4	Product	Integration between different parts of the game might cause compatibility issues and bugs. For example, using assets in the game might not link correctly.	**L**	**H**	It is important we do regular integration testing, to make sure things work in conjunction with each other correctly.	Rosie
R5	Team	Set roles in the group may evolve over time. A team member might be pushed into a role that isn't best suited to them and might end up stuck behind.	**M**	**M**	Ensure there's more than 1 member in each role at a time. Have constant communication so team members feel comfortable sharing concerns they have in their current role.	Mathilde
R6	Team	Sudden resignation of a team member due to illness or otherwise. (Or if a team member fails to contribute adequately).	**L**	**M**	The project is designed to work with 6 members, if we fall below that number we need to be in contact with course leaders who can advise us. Make any serious problems known to course leaders as they arise.	Mathilde

R7	Team	As we have a set gantt chart timeline to follow, it is possible we will have slipups and fall behind. This could disrupt future progress in the project for other members.	**H**	**M**	A good way to deal with this is to have an ideal finish date and then a 'maximum' finish date where the work absolutely has to be completed by. This is also linked to having at least two people in each role, so someone is able to take over if need be.	Mathilde
R8	Team	One major risk is team conflicts. This could happen if assigned a task a member is not happy with, or having disagreements about how the game functions.	**L**	**H**	Keep in contact with the professors of the course who have previously stated they can hold a conflict resolution session. Also important to make sure everyone is communicating well and openly throughout the whole process	Mathilde
R9	Team	It is likely that team members will face time constraints with the project due to other module work and personal commitments	**H**	**M**	It is important for us to plan flexible schedules. This fits in with risk 7, and requires us to all be openly communicative. It may be necessary to redistribute the work load. We must also track where we are with the tasks and review it regularly	Mathilde

Risk Assessment Reviews of Note

WC/ 3rd November.

Risk 6, 7 - Mathilde has been off for 2 weeks for a family situation but is back now and stayed in communication with the team to get work done. Risk 6 remains at level L likelihood. Risk 7 remains at a H likelihood. The timeline has been revisited and modified accordingly to our current pace and progress.

Risk 1 - We have discussed the idea of checking in with Robbert in the coming week or so to make sure the current version of the game aligns with his vision. Risk 1 remains at a high severity level.

Risk 5 - We have discussed we need to look more closely at team member roles. For the second half of the project, all team members are keen to code as opposed to doing the documentation side, so we need to make sure we are switching roles in an efficient manner. It is important to follow the risk guidelines here so it is a smooth hand-over and no singular member is stuck with a task on their own. Risk 5 remains at a M likelihood / severity level.

References

[1] *Project Planning and Risk Management.pdf, VLE*
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Kolovos, D. (2025). Project Planning and Risk Management. Department of Computer Science, University of YORK

IEEE (2018) ISO/IEC/IEEE International Standard - System and software engineering life cycle processes - requirement engineering
https://standards.ieee.org/ieee/29148/6937/

The Debug Thugs (2025) Escape the Maze - ENG1 Assessment 1 Project Website
https://thedebugthugs.github.io/