Risk Assessment and Mitigation

Team 19

DAVIDE BRESSANI
ALEX DAVIS
HASSAN MAHMOOD
DANIEL PARRY
HARRY SWIFT
BENJAMIN WITHNELL

a)

The risk format:

- The risk register we chose to implement has taken into consideration both known and unknown risks, with a unique id assigned.
- it is a database of logs which gives us a live indicator of the risks and how we should prioritise them
- We have recorded risk and assigned the likelihood and impact.
- The likelihood of risk occurring based on an appropriate scale from low(L) to high(H). The assigned notation represents the possibility of the risk materialising.
- Severity of risk also follows the same scaling classification system, which is the perceived impact the risk would have if it occurred.
- We are using simple scales and not going into excessive detail for the impact and livelihood, given the fact this is a small scale project with an end goal of non critical software.
- Mitigation strategies can be put in place to allow the severity to be lessened (e.g. contingency plans).
- This plan allows us to anticipate issues that could occur and how to minimize them from having a severe effect on the ENG1 project. This minimises the loss size from the action we have taken.
- The level of detail provided in the mitigation plan allows us to determine wherever the risk is worth the subsequent effort for the reward.
- Regarding the owner and responsibility of each risk, to avoid a low bus factor we would all reassess and decide on risks to be more confident in our findings.

Dynamic analysis:

- For the duration of the project, we regularly monitored risks in our Friday sessions and reassessed the subsequent analysis of each risk, assessing its likelihood and severity.
- This risk reviewing plan allowed us to dynamically approach our risk management instead of the static approach - leading to up-to-date risk level of details.

b)

Risk assessment and mitigation:

ID	Type	Description	Likelihood	Severity (impact)	Mitigation	Owner
R1	Project	Losing a member of the team due to unforeseen circumstances	L	M (due to us having 6 members, if we had 5 then the severity would be H)	Ensure a 2nd member is attached to all, especially critical, components of the project. Avoids a low bus factor, as they can do such tasks in event of this occurring (Contingency plan in place).	Everyone
R2	Product and project	Tool such as google drive becomes unavailable or buggy	L	M	To mitigate this, utilise internal documentation and that no 1 single file exists on only 1 device offline.	Everyone
R3	Product and project	There is in an error in the requirements, leading to the architecture being compromised	M	H	This can lead to an unhappy client, to mitigate this we ensure each requirement was checked by the client	Everyone
R4	Product	Third party library becomes unavailable	L	H	Can lead to incomplete game with errors, to mitigate this we use a more	Everyone

					reliable library that is active so requirements can still be met	
R5	Project	A lack of communication within the team, leading to disarray and confusion about roles and tasks	M	M	Organisation plan put in place with any doubts cleared up straight away.	Everyone
R6	Product	Tool or game bugs	M	M/H (depending on if it is game-breaking)	rolling back to the previous iteration of the game to search what went wrong or how to fix.	Everyone
R7	Project	Conflicts arising that escalate	L	M	Problems are voted on, and a facilitator in place. If unresolved and escalates, lecturers would be told to gain help.	Everyone
R8	Project	The game may not be delivered by the deadline	L	H	By implementing agile methods such as scrum which allows the client to receive some state of	Everyone

					the game as it would be done incremen tally.	
R9	Technolo gy	Game runs slow on customer hardware / software	M	H	Early testing on the clients specified devices and software's (I.e. Linux and Windows)	Everyone
R10	Product	Insufficient time to quality control the game	M	M	project organisation plan put in place to get it done with sufficient time, as well as test it incrementall y.	Everyone
R11	Product	Use of unlicensed program	L	M	Ensure everything is licensed or free to use	Everyone
R12	product	Systematic failures in the game's software	M	H	implementin g robust design processes such as regular testing and reviews	Everyone

Dynamic analysis:

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- This risk reviewing plan allowed us to dynamically approach our risk management instead of the static approach - leading to up-to-date risk level of details as they are re-evaluated

Regarding the owner and responsibility of each risk, to avoid a low bus factor we would all reassess and decide on risks to be more confident in our findings.