

# Risk Assessment and Mitigation - Runtime Errors - Team 25

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**5. Risk assessment and mitigation: [13 marks]**

**a)** Introduce and justify your risk format and level of detail  
(**3 marks**,  $\leq 1$  page).

**b)** Give a systematic tabular presentation of risks to the ENG1 project, their likelihood, impact, and mitigation  
(**10 marks**,  $\leq 3$  pages).

*ENG1 is a small project, developing non-critical software. Keep your likelihood and impact measures simple.*

## **Part A**

A Risk can be defined as anything that can threaten your project in the future, risks to a project can be either known or unknown and could harm development of the project. To monitor the risks to our project, we have created a tabular format to layout all potential risks.

The table has been split into 6 columns:

- ID, the ID of the risk.
- Type, the type of the risk (split into 3 categories).
- Identification, a brief description of the risk detailing the hazards we may come across.
- Likelihood, the probability of the risk occurring.
- Impact, the influence a given risk would have on the project.
- Mitigation, the measures we have in place to reduce the effects of the risk.

Having an ID for each risk allows us to identify each possible risk to the project, giving us a way of laying out the potential risks in a table so there is an organised list of any potential risk that could be an issue during the project.

We have split the risks into 3 separate categories, Project, Product and Technic. Project risks refer to any risks that could harm the schedule or resources in our project, identifying these will allow us to stay on schedule and ensure the project is finished in time. Product risks refer to risks that can harm the quality and completeness of the project, allowing us to make sure the project is of a sufficiently high quality once it is considered finished. Technic risks refer to any issue we could have with the production tools, as we are using tools unfamiliar to us it is important to know the risks that may be associated with the tools.

Identification gives a brief description of the risk, describing any potential risks is essential as it allows us to think about what we may expect to go through while working on our project.

Likelihood is the probability of the risk occurring, we have split this on a scale of 0-3, 0 being extremely remote, 1 being remote, 2 being reasonably probable and 3 being probable, identifying the likelihood of a risk will aid us as we will know what risks we have to be more aware of, again helping to prepare for when these risks arise.

Impact is the influence a risk could have on a project, this is again measured on a scale of 0-3, 0 being negligible, 1 being marginal, 2 being critical and 3 being catastrophic. Knowing the estimated influence of a risk will help to prioritise what risks we have to be aware of while working on the project.

Mitigation is a brief description of the control measures for each risk, these will help us to fix the potential risks when they come during the project, by preparing a measure for each risk we will be able to deal with them efficiently, minimising the harm they cause to the project.

**Part B**

ID	Type	Identification	Likelihood	Impact	Mitigation	Owner
R1	Project	Unable to work due to unforeseen reasons (health, technical issues)	2	1	Each of us work in partnership with another, shadowing them so if something goes wrong we can pick up where they left off	
R2	Technic	Can't achieve expected function	1	2	Read the official document to confirm whether it is feasible and whether it can be replaced by other methods	
R3	Project	Unable to take part in group meeting	1	1	Contact those who cannot participate, summarize the content of the meeting, and ensure that you understand the content of the meeting	
R4	Product	Assets files have copyright restrictions	2	0	Use copyright-free resources, purchase resources, or create resources by yourself	
R5	Product	Players don't think the game mechanics are interesting enough	2	3	Modify the game mechanics in a more interesting way without deviating from the project requirements	
R6	Product	The game is not smooth enough, or there are loopholes in the code that affect the smoothness of the game.	3	2	Test the game as much as possible during the game production process, this ensures that any possible loopholes are dealt with and the code is of as high a quality as possible.	

R7	Product	There is no time to make different styles of rooms, structures and maps.	2	1	Carry out modular design for rooms, facilities and maps to reduce the workload, and make appropriate adjustments to the already designed modules as new modules.	
R8	Product	Players don't like the design of characters, enemies and maps.	2	3	Design the original painting in advance, show it to the player, and record the player's feedback. Adjust according to feedback.	
R9	Product	The game is not balanced.	3	1	The balance data is written so that it is easy to modify, and different people spend a lot of time testing and balancing the game data.	
R10	Product	Each game time is too long or too short.	3	1	Appropriately increase or decrease the difficulty of the game, increase or decrease the complexity of the mechanism.	
R11	Project	Inefficient team work, resulting in more time and energy.	3	3	Increase teamwork ability and coordination, increase the frequency of team meetings and determine work progress on time.	
R12	Project	Team members are less motivated.	2	3	Actively drive each other's enthusiasm for work. Praise each other for good work when appropriate, keep team morale high.	
R13	Project	A Team members' progress is slow.	2	3	The team members with the faster progress have time to appropriately help the team members with the slower progress.	
R14	Product	The game has a major bug.	2	3	Investigate the bug in time, find the cause of the bug, and fix the bug.	

R15	Project	Team members struggling with a task they have been given.	2	2	Other team members can offer to help anyone who is struggling, use online resources and offer switch tasks around if needed.	
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