

Risk Assessment and Mitigation

Assessment 2

Group 5 :

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Risk Management Plan

Identification process

We are going to be using a deliberate and systematic approach to identifying risks. Our risks are only going to belong to four categories:

- Product: Risks associated with user experience in regards to the product
- Project: Risks regarding project development and management
- Technology: Risks concerning hardware and software components during or after development.
- Business: Risks related to the general ongoing operations of our project once its released, which could be legal or financial.

This is a form of abstraction so we try to only focus on what matters in our case. So we aren't looking at other irrelevant details. Also not going to be focusing much on business risks due to the lack of scope for our project.

Risks will be identified through regular brainstorming sessions , and will be updated throughout the documentation process. As they are identified we will be putting them on the risk register, which is in a spreadsheet format.

There will be a column for ratings for likelihood and severity. They will be rated in terms of low to high. There will also be an id column so that each risk can be uniquely identified and easily referenced. Then there will be columns for type(category) , risk description and then a column for mitigation plan and avoidance strategy, in order to prevent and deal with risks if they do occur.

When a risk has been identified after occurrence , we will work on a way to solve the issue and add it to the risk register , with an avoidance plan in place. This is to avoid further occurrences.

Risk ownership strategy

Each of these risks will have an owner in charge of reassessing the likelihood and severity of the risk regularly. Owners should bring up the status or report on their risks every meeting.

Risk reviewing plan

When possible we should be following avoidance plans for each of the identified risks. Owners should be reminding us of this.

If a risk does cause problems then we will work together to follow through on the mitigation plans. These will have already been thought about when adding the risk to the register.

Risk Register

ID	Type	Description	Likelihood	Severity	Mitigation and/or Avoidance	Owner	Change Reason
R1_2	Project	Lack of clear quick communication with the group, not utilising SCRUM agile methods	H	M	Discord Server to allow communication outside of Meeting Times which are: 4 hr/week during term time set aside for meetings 1 hr/week outside of term time set aside for SCRUM meetings	Project Leader	More clear, concise risk with a nod to agile methods
R2_1	Product	Mislabeling of variables in code impacting code readability, increasing time taken for other staff to understand recent additions to code.	L	L	Predetermine code naming conventions and acceptable contextual names. Make sure progress during implementation is explained to the rest of the team incrementally during meetings or commit notes. If issues arise with readability then direct concerns to the group/person working on the code .	Implementation Lead	
R5_2	Project	Code Files/Documentation stored on an independent device, not accessible to other team members	M	M	Push latest version any code (UML, Java, Markdown) onto Git with descriptions of changes. Always use Google Docs to edit the documentation files	Team (lead by report editor and github organiser)	More clear, concise risk
R6_2	Project	Team member becomes unresponsive or unable to complete work	M	H	Pair/Group Work Increasing the bus factor on each task (assigning at least 2 people to any one important task) to ensure no Single Point of Failure. See R5_2 about sharing files, a strategy to further increase bus factor. Fresh Documentation To ensure that tasks can be picked up where they left off with limited understanding of context	Team Pairs	More detailed mitigation strategy

R8_1	Business	Licensing issues in regard to assets used.	L	M	Inform members about each asset and let them know the source. Check licensing for each of these assets and research sources. Every asset must have documentation detailing the licences. Owner of this risk will be in charge of ensuring this is up to date and accurate	Implementation Lead	
R9_2	Technology	Big changes to the implementation side of the project lead to major refactoring required later.	M	H	Handle big changes first, in order to reduce the amount of refactoring needed	Implementation Team	Elaboration key risk for part 2
R10_2	Technology	Updating the project may lead to certain requirements such as non-functional/function al requirements no longer being met.	H	M	Ensure to use a test-driven approach using Continuous Integration methods so each update has to pass a series of tests which are designed in regards to requirements. Including automatic unit tests and a short list of manual tests where needed	Testing Team	Elaboration on key risk for part 2
R11_1	Product	Product not working for a certain OS. Like UNIX systems.	M	H	Ensure that testing is done on multiple OS systems. If problems are found try to find solutions through research and working with the rest of the team.	Testing Team	
R12_1	Product	Game might be difficult to understand and hard to play.	M	L	Make sure to design requirements to prevent the game from being difficult or confusing for the player. This could be through implementing tutorials and intuitive features. Moreover, test the game out with those not involved in development to prevent this from occurring and if it is found to be difficult then work on feedback and make some changes.	Testing Team	
Removed Risks (Kept for reference):							

R3_R	Project	Lack of communication resulting in staff not knowing what is to be worked on in a given session. Therefore losing track of progress.	L	H	Arrange weekly meetings outside of practical sessions and record every meeting within the logbook. If any team member is not sure what to do then, they should check the logbook and ask the rest of the team for help.	<u>Zack Tyler-Kyle</u>	Covered by R1_2
R4_R	Technology	Poor internet connections/loss of connection hampering or preventing continuation of session.	H	M	Save and backup work frequently and have multiple staff in a session to cover if needed.	<u>Pranshu Dhungana</u>	Covered by R1_2
R7_R	Project	Administrative issues wherein not everyone may be able to access a certain document or part of code and review it. This may lead to errors with documentation/implementation .	L	L	Ensure everyone works using a shared space such as google drive. Updates should be made to the documents stored on the team 6 drive. If anyone is unable to find or access documents that another team member is working on then this must be addressed by the owner of the documents/task.	<u>Sanjna Srinivasan</u>	Covered by R5_2
R13_R	Project	Conflict arising between members in regards to distribution of work. Preventing progress.	H	M	Make sure work is distributed during each meeting, members should discuss and work together to come to an agreement on who needs to do what. If two people wish to work on a task requiring only one person then the rest of the team should hear them out and decide on how to resolve the conflict.	<u>Phoebe Russell</u>	Covered by R5_2

Risk Log:

These are risks that were encountered that were considered high priority or were handled differently to how the mitigation strategy suggested based on the context.

Date: 27/02/23

Risk: R5_2

Code Files/Documentation stored on an independent device, not accessible to other team members

Context: Team 6 website which was hosted on GitHub pages went down which was being used to reference the website changes that we were making since it was a new format of website creation using markdown to which we were initially unfamiliar.

Solution: We had cloned Team 6's website repository and whilst figuring the specifics for hosting on GitHub pages, we found a free tool online to preview the website pages

<https://markdown-it.github.io/>

Date: 03/03/23

Risk: R1_2

Lack of clear quick communication with the group, not utilising SCRUM agile methods

Context: A couple of weeks in, we had not gotten an overall plan together for SCRUM implementation and what should be prioritised, which is a huge risk as it threatens large amounts of refactoring implementation later and no sense of direction or deadlines for the project.

Solution: Following the risk mitigation strategy, we hosted 2 hour bi weekly meetings during term time and 1 hour weekly meetings outside of term time. In addition, we filled out the systematic plan and laid out the Gantt Charts for future weeks

Date: 08/03/23

Risk: R9_2

Big changes to the implementation side of the project lead to major refactoring required later.

Context: With the change in requirements to add save states into the game, after taking the time to plan how this would be implemented, we came to the conclusion that this would be a difficult feature to implement and would require changing lots of prior code.

Solution: Following the risk mitigation strategy, we decided to prioritise this feature to be implemented first, in order to reduce the amount of refactoring the code would require later.