Risk management process

We began the process by discussing as a group our past experiences from group projects in the context of what risks could arise from three categories: team, technology and product. These categories were used because they covered the three major factors which could go wrong in the project: issues related to the organization and dynamic of the team, issues arising from implementation and issues related to the customer. All identified risks were documented, separated by their category.

Then we discussed the likelihood and severity of each risk occurring, and assigned each risk a rating of low, medium or high. A qualitative scale was used because it provides a reasonable, easily understandable estimate into the severity of a risk, whilst a quantitative scale would be less specific. Only three categories were used, as if the scale was expanded (e.g. to 1-10) it would add unnecessary precision, therefore confusion and debate in deciding how severe a risk is.

After the risk analysis process, we discussed strategies to mitigate risks. Primarily avoidance and minimization strategies were used, and for each risk mitigation strategies were devised and documented for our group to follow if the risk occurred.

Format of risk registrar

The header of the table includes the following:

- *ID* so that risks can be easily referenced
- *Type* denotes one of the three types of risk as discussed above
- *Description* contains a short, easy to understand explanation of the risk
- *Likelihood* denotes the probability of a risk occurring using the low-high scale
- *Severity* denotes the severity a risk would have on the project if it occurs using the low-high scale
- *Mitigation* describes the group strategy for dealing with the risk if it occurs
- *Risk owner* describes the person responsible for keeping track of, and dealing with the risk if it occurs

Risk registrar

ID	Type	Description	Likelihood	Severity	Mitigation	Owner
R1	Team	Fall behind schedule	Low	High	Keep a Gantt Chart to keep track of progress, and have weekly group meetings to discuss if we're on track	Matthew Havers
R2	Team	Code integration conflicts	Medium	Medium	Use GitHub as a central repository for team members to commit implementation changes, and keep up-to-date with other members commits	Daniel Packer
R3	Team	Team miscommunication	Low	Medium	Use communication method(s) all group members can be involved in (e.g. group chats), and have frequent in-person group meetings	Matthew Havers
R4	Team	Missing files	Medium	Medium	All important work is stored in the cloud (GitHub/Google Drive), so that files cannot go missing by personal fault	Charlie Armstrong
R5	Technology	Not enough time allocated to implementation	Medium	Medium	Implementation team should offload their documentation work onto other group members, and if possible, other members with less work should help with the implementation	Daniel Packer
R6	Technology	Unfamiliarity with the game engine	High	Low	Allocate implementation tasks to members more confident with programming and allow enough time to get familiar with the game engine before implementing	Daniel Packer
R7	Product	Customer requirements not correctly implemented	Medium	High	Check all requirements from the priority table are implemented during the architecture/implementation stages, and ensure no additional requirements are implemented without good	Charlie Armstrong

					reason	
R8	Product	Customer requirements drastically change later in the project	Medium	Medium	Frequently meet with the customer to check for changes in requirements, revise our plan if any major changes occur	Charlie Armstrong
R9	Product	Final product not fully tested	Medium	Medium	Allocate enough time in our schedule for testing the final product, ensure at least a few group members manually test the game to catch edge cases, and include automated tests for the final product	Daniel Packer
R10	Product	Key group members are ill at critical times in the project	Medium	High	Allocate at least two group members for longer tasks so that if one member is ill, progress is still made for the task	Matthew Havers