Section 4

Risk Assessment and Mitigation

Additions: Green

4.1   Introduction

Throughout the project we will face a number of potential risks however we will do our best to mitigate them. When analysing the risks we will focus on two factors, likelihood and severity. To identify risks we first identified the different kind of risks we could face (Technological, staff problems, etc.) and then went through those categories trying to find specific risks within them. This was useful as it allowed us to look at the risks from multiple perspectives and effectively identify them.

A risk can either have a high, medium, or low chance of becoming a reality. If a problem is not likely to occur when running a project three times or more we deem it to have a low likelihood. If it is likely to occur once during the project or when running a project twice we deem it medium likelihood. Finally, if it is likely to occur multiple times during the project, we will deem it as high likelihood.

A risk can also either be high, medium, or low in severity. A high severity risk could result in months of lost progress up to having to totally start over. A medium severity risk could result in the loss of between one week and a few weeks of progress. Finally a low severity risk would only result in a maximum of a few days of lost progress.

To combine these two factors into something meaningful we will use a risk matrix (Figure 4.1). This will allow us to find a balance and identify the risks that will pose major problems.

| | | Likelihood | | |
		Low	Medium	High
Severity	Low	Low	Low	Medium
	Medium	Low	Medium	High
	High	Medium	High	High

Figure 4.1: Table showing how likelihood and severity of a risk combine to show overall impact of the risk

Green cells in the matrix are considered to be overall low risk, this is because they are not particularly likely to happen and if they do they will not have be severe enough to majorly impact the project. Orange cells signify an overall medium risk. They are either likely to happen but low severity, very unlikely to happen but would have a very severe impact or somewhere between. Overall high severity risks, red cells, are the most important to mitigate. They have a reasonably high chance of happening and could result in the loss of weeks or months of work.

It is important to categorise risks once they have been identified so that we can prioritise mitigation, it is imperative that overall high risks cannot happen and in the case that they do we must be able to cope with them and have protocols in place to lessen the impact.

We will be presenting the risks in a risk register with columns identifying, analysing and showing the mitigations for the risk. This will give us an accessible and easily modifiable document which we will be able to use throughout the project when considering or attempting to mitigate risks.

4.2   Risk Assessment

ID	Category	Name	Severity	Likelihood	Overall	Mitigation	Contingency	Risk Ownership
1	Tech	Data lost - E.g. hard drive failure.	Medium	Low	Low	Backup data regularly to cloud or different devices.	Restore most recent backed up data.	Technician
2	Staff	Staff not listening to other team members	Low	Low	Low	More communication, consult Richard/Fiona if the problem continues.	Stay together and work out the root reason, then resolve it.	Team Leader
3	Tools	Tools not available	Low	Medium	Low	Research background information about alternatives before proceed.	Switch to an alternative tool, request help from IT support or create one if enough time before deadline.	Technician
4	Tools	Unfamiliar with the toolset.	Low	Medium	Low	Learn how to use the tool.	Ask IT support or other teammates for help.	Team member affected
5	Tools	Tools become less useful as the project progresses.	Low	Medium	Low	Do extensive research and comparison before integrating to the workflow.	Find alternative and re-evaluate options.	Technician
6	Requirements	The requirements cannot be implemented	Low	Low	Low	Negotiate with the customer before updating the requirements.	Explain to the customer what has to be changed and offer alternatives.	Customer Interface
7	Staff	Team member leaves	High	Low	Medium	-		
8	Requirements	Change of requirements.	Low	High	Medium	Keep in touch, build and show to the client.	Update the requirement document and update the product.	Customer Interface
9	Staff / Requirements	Staff fail to complete the task before a deadline.	High	Low	Medium	More rapid sprint to ensure everyone is on track.	Cut our optional features and complete the compulsory requirements first.	Team Leader
10	Tech	Security Threats	High	Low	Medium	Install antivirus software and enable firewall.	Seek IT support for help and continue working.	Technician
11	Customer risks	Customer changes the requirements.	Low	High	Medium	Keep in touch and understand the necessary changes as soon as possible.	Examine new requirements and update them accordingly.	Customer Interface

ID	Category	Name	Severity	Likelihood	Overall	Mitigation	Contingency	Risk Ownership
12	Customer risks	Customer doesn’t allow or understand why we have to change the requirements.	Medium	Medium	Medium	Keep in touch with the customer.	Sit next with the customer and talk through the reason why.	Customer Interface
13	Customer risks	Customer decides to cancel the project.	High	Low	Medium	Keep in touch with the customer while developing the project.	-	Team Leader
14	Test risks	Staff unable to find a bug	Medium	Medium	Medium	Put comment around the code to describe, and do tests.	Debug the problem using a debugger and seek for help.	Technician
15	Staff	Staff sick or unable to attend meetings.	Medium	High	High	Let other members of the team know as soon as possible	Other staff takes over their work temporarily.	Team Leader
16	Estimation	Estimation that there will not be enough time to finish the whole project.	High	Medium	High	Allocate and plan the time efficiently.	Plan and spend more time for the project.	Team Leader
17	Test risks	Bugs discovered	Medium	High	High	Understand the code and have comments around them.	Fix bugs.	Technician