RISK ANALYSIS

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CSCI 375

Document Overview

In this document, we will give a description of the risk analysis framework associated with our project along with a description of the management plan developed by the team to deal with each of the aforementioned plausible risks.

We start the risk analysis framework section with a general overview, identifying the nature of risks the team has decided to track and manage, and the reasons for choosing those risks. We then provide a table identifying the risks, categorizing them by their probability, and severity through the framework. We close the section by describing each of the given tabularized risks.

We then move to describing our risk management plan, by providing an overview of our plan and then describing the plans the team has chosen to track and manage. These are mainly plans for monitoring risks, avoiding risks, mitigating the damage associated with risks, and contingency plans for dealing with the occurrence of risks. The section will conclude with a summary of the risk plan.

Project Update

There is one main update to our project, and it pertains to our previously proposed project management plan.

Project Plan Update:

As a team comprising of five team members, having all team members voluntarily contribute to the project without precise tasks did not play as planned. There wasn't a fair share of contribution from all members at any given time. Therefore, the team manager will breakdown all the tasks into subtasks and assign them to all five members as fairly as possible. Individual members may work together on certain tasks if prior permission from the manager has been granted.

***Updated software plan table attached in Appendix l.**

Risk Framework

Our risk analysis framework will cover the risks we feel are most important to our group, covering all risks we can reasonably foresee. We chose not to include risks that were either so trivial or highly unlikely, as well as those which lie outside the scope of the project like, long term maintenance and curation risks.

RISK ANALYSIS Table a.

Risk	Probability	Severity
1. Loss of a team member, permanently	Low	High
2. Loss of a team member, temporarily	Low	Low
3. Unexpected design problems, requiring a change in design	High	Medium to Low depending on exact circumstances
4. Data loss	Low	Low or High depending on exact circumstances
5. Unexpected loss of access to resources (i.e. being unable to access the lab)	Low	Low
6. Team member not reaching a deadline	Medium-Low	Medium
7. Team member repeatedly failing to meet deadlines and goals	Low	Medium-High
8. One or more members missing a meeting	High	Low

Description of Identified Risks:

1. Permanent loss of a team member: Although not likely, a loss of a team member permanently is possible in case of medical or personal emergencies or voluntary withdrawal from the course. Because all the tasks assigned to that member will need to be assigned to other members, this will cause great inconvenience for the team.

2. Temporarily loss of a team member: This may be due to minor emergencies or certain circumstances that might require a team member to be away for a short period of time. This wouldn't cause much inconvenience as its temporary.

3. Unexpected design problems, requiring a change in design: This is a risk that the team will probably face as it is a common risk in software implementation. Because redesign is a core part of the project and a decent amount of time is allocated for resign and re-implementation, we will consider this risk of medium to low severity.

4. Data loss: Although not very likely, data loss is possible and can vary from low to high severity depending on the data and time at which data has been lost.

5. Unexpected loss of access to resources: This is not likely to happen or be of much inconvenience to the team as a whole at a given time. This is mainly an issue if it affects an individual member for a long period of time or close to a deadline.

6. Team member not reaching a deadline: This is a vital risk to consider as it is of medium probability and severity. It affects the team as a whole and should be studied well.

7. Team member repeatedly failing to meet deadlines and goals: Although not likely, this risk will be of inconvenience to the whole team and might require big changes to the project structure.

8. One or more members missing a meeting: This is a common risk and is of low severity as the team mostly communicates over email.

Risk Plans

Risk Framework

Our risk management plans cover three types of risk: Changes, Emergencies, and Deficiencies. Changes, are long term issues that affect the project going forward. Emergencies, are the sudden temporary problems that require an immediate solution. Deficiencies, are unsolvable problems originating from either a specific member or from the team itself. Our primary means of tracking these risks is through the use of the shared git and frequent communication, which should allow us to spot problems as they develop. The aforementioned method also serves to minimise the damage causes when one of the risks comes to pass by allowing our group to act before a problem becomes big to handle. In abstract our plan for dealing with these risks is to plan as though this was a four member group rather than the five it is, thereby allowing us to maintain a level of flexibility to respond to the risks if they become manifest. For Changes, our plan is to use our meeting times to reschedule our deadlines and workloads to accommodate the change. In the case of Emergencies, the team manager will assign the task to the person

most able to take on the task. Finally there is the case of Deficiencies, by their nature Deficiencies are very difficult to solve, our primary method of mitigating these risks is to rebalance the workload to match each members capabilities.

Quick fix to identified risks:

1. Loss of a team member, permanently
   Fix: Emergency meeting will be held to decide whether to trim certain elements out of the project to make up for lost man power or divide unassigned tasks between members.

2. Loss of a team member, temporarily
   Fix: Emergency meeting will be held and all tasks will be temporarily assigned to other team members accordingly.

3. Unexpected design problems, requiring a change in design
   Fix: Meeting will be held and redesign should be decided on quickly.

4. Data loss
   Fix: Emergency meeting will be held or email thread will be created where issue will be addressed and dealt with accordingly. Worst case, team will perform quick code patching by replacing the lost data with static decorative data.

5. Unexpected loss of access to resources
   Fix: This should be dealt with individually, but if members are not able to resolve the issue, they should contact the manager. The manager is responsible for finding a solution either by taking up the work or contacting other members and finding a solution.

6. Team member not reaching a deadline
   Fix: Manager should call the member understand the situation and find a solution. A solution could either be for the manager to assign work to other members last minute or come up with a quick rundown fix.

7. Team member repeatedly failing to meet deadlines and goals
   Fix: Emergency meeting will be held and issue will be addressed. Worst case follow fix for “loss of a team member, permanently”, and contact instructor for help.

8. One or more members missing a meeting
   Fix: Missing team members will be updated via email or phone.

Risk Plan Summary

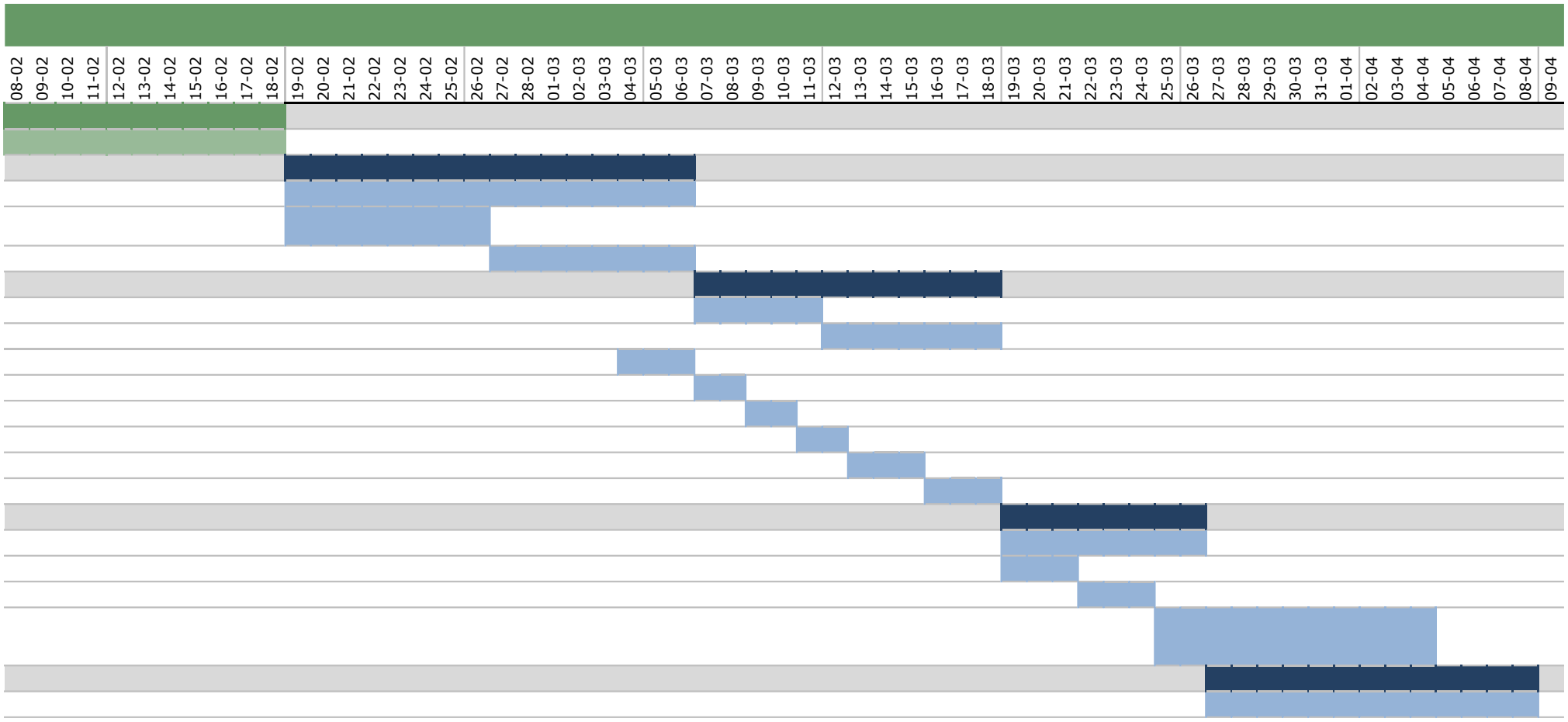
In conclusion, we plan on monitoring unexpected design problems, individuals not meeting or failing to reach deadlines and overall data in the general sense after every deadline, as they are risks we can monitor and measure. As for other sudden risks, we will look for the corresponding quick fix we outlined as they occur. Since the identified risks are not inclusive, in general we will hold an emergency meeting and come up with a quick solution as a team when we have enough time to do so, otherwise, the manager is responsible for last minute solutions and quick fixes.

Appendix l.

1. **Updated software plan table.**

Make It Work!

ID	Task Description	Assign To	Nature	Start Date	Planned End Date	Actual End Date	% Complete	Work Days Planned	Work Days Elapsed	Work Days Remain	Work Days Overrun	05-02	06-02	07-02
1	**Risk Anlysis**			**05-Feb-18**	**18-Feb-18**			**10**	**10**	**0**	**0**			
1.1	RiskAnalysis.pdf	all mem		05-Feb-18	18-Feb-18			10	10	0	0			
2	**Requirements + Evaluation**			**19-Feb-18**	**06-Mar-18**			**12**	**0**	**12**	**0**			
2.1	Requirements.pdf	all mem		19-Feb-18	06-Mar-18			12	0	12	0			
2.2	Functionality requirements gathering	Sami + Pete	Elicitation	19-Feb-18	26-Feb-18			7	0	6	0			
2.3	User and task analysis	Sami +Pete	Elaboration	27-Feb-18	06-Mar-18			7	0	6	0			
3	**Process Model +Data Model**			**07-Mar-18**	**18-Mar-18**			**8**	**0**	**8**	**0**			
3.1	ProcessModel.pdf	all mem		07-Mar-18	11-Mar-18			2	0	3	0			
3.2	DataModel.pdf	all mem		12-Mar-18	18-Mar-18			5	0	5	0			
3.3	Specifications Document	Caleb+Tony	Specification	04-Mar-18	06-Mar-18			2	0	2	0			
3.4	Conceptual Design	Caleb + Ben	Specification	07-Mar-18	08-Mar-18			1	0	2	0			
3.5	UI Prototype	Ben + Tony	Implementation	09-Mar-18	10-Mar-18			1	0	1	0			
3.6	UI Testing	Sami +Pete	Validation	11-Mar-18	12-Mar-18			1	0	1	0			
3.7	User Evaluation	Caleb+Tony	Validation	13-Mar-18	15-Mar-18			2	0	3	0			
3.8	Fix UI accordingly	Ben + Tony	Implementation	16-Mar-18	18-Mar-18			2	0	1	0			
4	**Architectural Design**			**19-Mar-18**	**26-Mar-18**			**6**	**0**	**6**	**0**			
4.1	ArchDesign.pdf	all mem		19-Mar-18	26-Mar-18			6	0	6	0			
4.2	Software Implementation	all mem	Implementation	19-Mar-18	21-Mar-18			2	0	3	0			
4.3	Software Testing	Caleb+Tony	Validation	22-Mar-18	24-Mar-18			2	0	2	0			
4.4	Iterate over implementation and testing + update files6 until satisfactory	all mem	Validation	25-Mar-18	04-Apr-18			10	0	8	0			
5	**Prototype Demo + final Project**			**27-Mar-18**	**08-Apr-18**			**9**	**0**	**9**	**0**			
5.1	Closeout.pdf	all mem		27-Mar-18	08-Apr-18			9	0	9	0			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