



ADDIS ABABA UNIVERSITY
ADDIS ABABA INSTITUTE OF TECHNOLOGY
SCHOOL OF INFORMATION TECHNOLOGY AND
ENGINEERING

PROGRAM OF SOFTWARE ENGINEERING

Dormitory Placement and Management System

Risk Management Plan

Team Members:

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|--------------------|-------------|
| 1. Abenezer Kindie | ATR/5410/09 |
| 2. Biruk Niguse | ATR/6351/09 |
| 3. Daniel Geremew | ATR/8104/09 |
| 4. Dawit Yonas | ATR/7114/09 |

Advisor: Dr. Manjunath Gadiparthi

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1. INTRODUCTION

1.1. Purpose Of The Risk Management Plan

A risk is an event or condition that, if it occurs, could have a positive or negative effect on a project's objectives. Risk Management is the process of identifying, assessing, responding to, monitoring, and reporting risks. This Risk Management Plan defines how risks associated with the Dormitory Placement and Management System project will be identified, analyzed, and managed. It outlines how risk management activities will be performed, recorded, and monitored throughout the lifecycle of the project and provides templates and practices for recording and prioritizing risks.

This Risk Management Plan is created by the team members in the Planning Phase of the project and is monitored and updated throughout the project.

The intended audience of this document is the project team, project sponsor and management.

2. RISK ASSESSMENT

The project team working on the project together with the necessary stakeholders will ensure that risks are actively identified, analyzed, and managed throughout the lifetime of the project. Risks will be identified as early as possible in the project so as to minimize their impact. Since the project implementation methodology (Agile) will allow us to collect requirements even late in the project lifecycle, necessary risk assessment will be done in parallel with the cycles of new requirements. Also since other changes other than requirement change will be accepted throughout the project's life cycle, necessary risk assessment as early as possible will be done with that respect too.

The plans to accomplish the plan written above are listed and described in detail in the following sections.

2.1 Risk Identification

Risk identification will involve the project team, the project advisor Dr. Manjunath Gadiparthi and other appropriate stakeholders, and will include an evaluation of requirements, design, environmental factors, financial factors etc and the project management plan including the project scope etc undivided attention will be given to the project deliverables, assumptions,

constraints, cost/effort estimates, resource plan, and other key project documents while in the phase of the lifecycle of the project.

A Risk Management Log will be generated and updated as needed and will be available in an online document available with edit access to all relevant stakeholders. Team members can discuss local (small and implementation) risks that don't need to go to management through a trello board that is maintained throughout the project lifecycle.

The project team along with the project advisor will use techniques such as biweekly meetings, brainstorming sessions, reviewing of the relevant documents, through requirement analysis and revision to identify potential risks.

2.2 Risk Analysis

All risks identified through processes discussed above will be assessed to identify the range of possible outcomes for the project. Qualification will be used to determine which risks are the top level risks to pursue and respond to and which low level risks can be ignored.

2.2.1. Qualitative Risk Analysis

This section describes how the risks identified are analyzed qualitatively. We can use two metrics to classify risks. Which are the Impact and probability of occurrence. Impact refers to the effect the risk could have on the product and the probability refers to how often the risk is manifested in the lifecycle of the project. The impact and probability of occurrence for each identified risk will be assessed by the the team members, with input from the advisor and other stakeholders using the following approach

Probability

- ★ Very High – Greater than 85% probability of occurrence
- ★ High – Between 65% and 85% probability of occurrence
- ★ Medium – Between 25% and 65% probability of occurrence
- ★ Low – Below 25% probability of occurrence

Impact

- ★ Very High – Risk that has the potential to greatly impact project cost, project schedule or performance
- ★ High - Risk that has the potential to impact project cost, project schedule or performance considerably
- ★ Medium – Risk that has the potential to moderately impact project cost, project schedule or performance
- ★ Low – Risk that has relatively little impact on cost, schedule or performance

I M P A C T	<i>Very high</i>				
	<i>high</i>				
	<i>medium</i>				
	<i>low</i>				
	PROBABILITY	<i>low</i>	<i>medium</i>	<i>high</i>	<i>Very high</i>

Table 1: Program Risk Management Assessment Scale

Risks that fall within the RED and YELLOW zones will have risk response planning which may include both a risk mitigation and a risk contingency plan.

2.2.2. Quantitative Risk Analysis

Analysis of risk events that have been prioritized using the qualitative risk analysis process described above and their effect on project activities will be estimated, a numerical rating applied to each risk based on this analysis to see the overall effect of the risk with respect to the project. Tools will be used to numerically analyze the risks and their effects . one such tool is called Decision tree analysis which can help to estimate if the project will be completed within the allocated time and money. And also helps in choosing what course of actions to take based on the quantitative analysis done.

2.3. Prioritization

Each major risk (those falling in the Red & Yellow zones in the table provided [here](#)) will be prioritized based on the scale of impact and probability of occurrence.

In addition to the scale used from the qualitative risk analysis section, Risk Urgency Assessment will be used to further prioritize actions that should be taken. The factors that will be taken into consideration includes the time availability of the project team to respond, warning signs of risks etc.

3. Risk Control

3.1. Planning Strategies

After the risk has been identified and evaluated, the project team develops a risk control plan, which is a plan to reduce the impact of an unexpected event. For each major risk, one of the following approaches will be selected to address it:

- **Risk mitigation** - identified risks of in-house components will be reviewed and modified by project team to reduce all and any future risks. It is the project team's responsibility to keep track of changes on the system and thoroughly test the system regularly if it's been affected throughout different builds/versions of the project.
- **Risk transfer** - risks with monetary implications shall be transferred to appropriate parties after the project team and project advisor review it and decide to outsource the task to an external entity
- **Risk avoidance** - risks identified early on will be dealt with before their impact
- **Risk acceptance** - nothing can be done

3.2. Resolution

The team will use the following resolutions whenever appropriate.

Research: Research will be done by members of the team whenever a task or its impact and likelihood of occurrence is possibly not clear and understood yet.

Accept: The risk is unavoidable and must be accepted as-is. Since nothing can be done about it, Anticipation becomes the key to dealing with this category of risk.

mitigate: The team will identify ways to reduce the probability or the impact of this type of risk. The risk will have to be reviewed in future to define the threat it poses.

Eliminate: The risk is unacceptable under any circumstances and must be eliminated as a possibility. The project team must put in place processes and procedures not only to ensure the immediate threat is eliminated but that it does not re-occur in the future.

In addition, the team will do a thorough compatibility analysis and benchmarking because of the anticipated risks that come with using externally furnished components.

3.3. Monitoring

The level of risk on a project will be tracked, monitored and reported throughout the project lifecycle. The project team will be responsible for overseeing risk resolutions and keeping an updated risk register log. The project team will review the project's risks every month during the weekly meeting. All project change requests will be analyzed for their possible impact to the project risks. Relevant stakeholders will be notified of important changes to risk status as a component to a report that's represented.

APPENDIX A: REFERENCES

- Template for the preparation of this risk management plan document is partly taken from [here](https://www2a.cdc.gov/cdcup/library/templates/CDC_UP_Risk_Management_Plan_Template.doc). (https://www2a.cdc.gov/cdcup/library/templates/CDC_UP_Risk_Management_Plan_Template.doc)
- <https://www.vectorsolutions.com/resources/blogs/risk-matrix-calculations-severity-probability-risk-assessment/>

APPENDIX B: KEY TERMS

Risk Register Log - *a document used as a risk management tool and to fulfill regulatory compliance acting as a repository for all risks identified and includes additional information about each risk.*