HOUSEHUNT

RISK MANAGEMENT PLAN

Version 1.1
09/25/2021

VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	Spriha Bankata Mishra	09/25/21			Initial Risk Management Plan draft
1.1	Sabrina Heng Chor Chen	09/25/21	Spriha Bankata Mishra	09/25/21	Added Introduction, Risk Management Procedure

UP Template Version: 11/30/06

TABLE OF CONTENTS

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 HouseHunt 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.
The Risk Management Plan is created by the project manager in the Planning Phase of the CDC Unified Process and is monitored and updated throughout the project.
The intended audience of this document is the project team, project sponsor and management.

2 RISK MANAGEMENT PROCEDURE

2.1 PROCESS

The project manager working with the project team and project sponsors will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified as early as possible in the project so as to minimize their impact. The steps for accomplishing this are outlined in the following sections. The Quality Assurance Manager will serve as the Risk Manager for this project.

Below is the process for the team to respond to any risk:

1. Identify potential risks
2. Weigh and measure risks
3. Evaluate risks
4. Managing risks
5. Monitor risks

The team will start by identifying potential risks that could possibly occur during each stage of our project. We will then weigh and assess the risks by identifying the probability using the Risk Scoring Matrix (Qualitative Risk Analysis). On top of this, we will also be adopting numerical ranking to prioritise the risks. Next, we will be using risk treatment to solve the potential risks found in step 1. Finally, we will monitor the risks to prevent possible lapses or the occurrences of them.

2.2 RISK IDENTIFICATION

Risk identification will involve the project team, appropriate stakeholders, and will include an evaluation of environmental factors, organizational culture and the project management plan including the project scope. Careful attention will be given to the project deliverables, assumptions, constraints, WBS, cost/effort estimates, resource plan, and other key project documents.
A Risk Management Log will be generated and updated as needed and will be stored electronically in the project library located at Team 5 WikiLink.

2.3 RISK ANALYSIS

All risks identified will be assessed to identify the range of possible project outcomes. Qualification will be used to determine which risks are the top risks to pursue and respond to and which risks can be ignored.

2.3.1 Qualitative Risk Analysis

The probability and impact of occurrence for each identified risk will be assessed by the project manager, with input from the project team using the following approach:

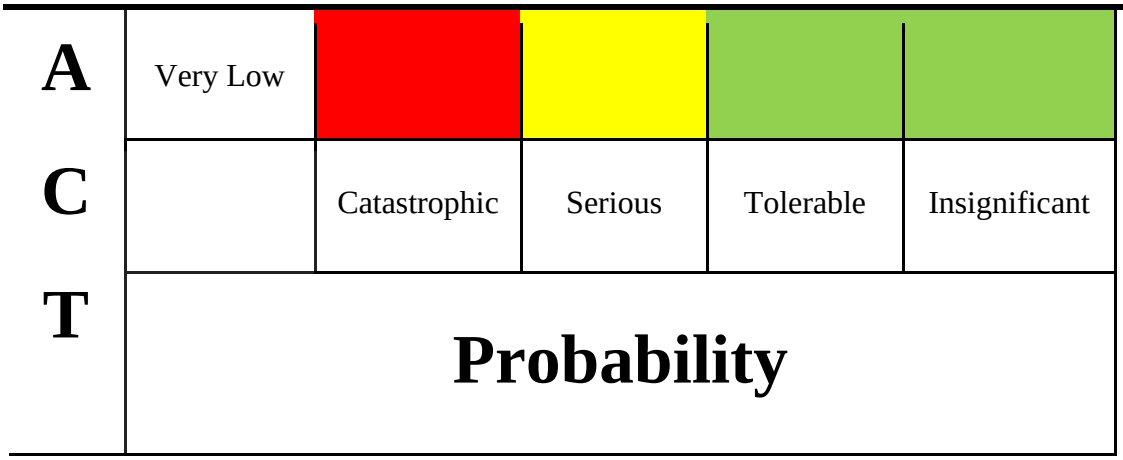
Probability

- Very High (Red) – Greater than **80%** probability of occurrence
- High (Red) – Between **60% to 80%** probability of occurrence
- Medium (Yellow) – Between **30% to 60%** probability of occurrence
- Low (Green) – Between **15% to 30%** probability of occurrence
- Very Low (Green) Below **15%** probability of occurrence

Impact

- Catastrophic – Risk that can greatly impact the entire project severely that can cause the project to be terminated
- Serious– Risk that has the potential to greatly impact project cost, project schedule or performance
- Tolerable– Risk that has the potential to slightly impact project cost, project schedule or performance
- Insignificant– Risk that has relatively little impact on cost, schedule or performance and the chance of occurring

I	Very High				
M	High				
P	Medium				
	Low				



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.

2.3.2 Quantitative Risk Analysis

Analysis of risk events that have been prioritized using the qualitative risk analysis process and their effect on project activities will be estimated, a numerical rating applied to each risk based on this analysis, and then documented in this section of the risk management plan.

2.4 RISK RESPONSE PLANNING

Each major risk (those falling in the Red & Yellow zones) will be assigned to a project team member for monitoring purposes to ensure that the risk will not "fall through the cracks".
For each major risk, one of the following approaches will be selected to address it:

- **Avoid** – eliminate the threat by eliminating the cause
- **Mitigate** – Identify ways to reduce the probability or the impact of the risk
- **Accept** – Nothing will be done
- **Transfer** – Make another party responsible for the risk (buy insurance, outsourcing, etc.)

For each risk that will be mitigated, the project team will identify ways to prevent the risk from occurring or reduce its impact or probability of occurring. This may include prototyping, adding tasks to the project schedule, adding resources, etc.
For each major risk that is to be mitigated or that is accepted, a course of action will be outlined for the event that the risk does materialize in order to minimize its impact. Risks with greater impact are given greater priority than risks with lesser impact.

The team's strategy will focus on risk avoidance, mitigation and contingency planning.
Risk avoidance involves elimination of risk, activities, and exposures that can be detrimental to the outcome of the project. Once all risks are identified, vulnerabilities which pose a threat are minimised.
Risk mitigation is the process of taking steps to reduce adverse effects. While this may not eliminate risk completely, risk can be reduced to ensure functionality is not hindered.
Finally, contingency planning involves accepting certain risks which are an inherent part of every project and too cost-inhibitive to mitigate while sticking to a budget. These can be documented and re-evaluated after a period of time to keep impact in check.

2.5 RISK MONITORING, CONTROLLING, AND REPORTING

The level of risk on a project will be tracked, monitored and reported throughout the project lifecycle.
A "Top 10 Risk List" will be maintained by the project team and will be reported as a component of the project status reporting process for this project.
All project change requests will be analyzed for their possible impact on the project risks.
Management will be notified of important changes to risk status as a component to the Executive Project Status Report.

To combat against existing and new risks, HouseHunt's project team conducts risk monitoring to ensure the plan's execution for risk handling and its effectiveness. Moreover, unforeseen risks may arise and a robust contingency plan is required to control these. The team will alternate between different strategies and implement the plan as a provision.

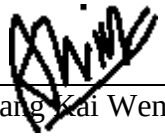
3 TOOLS AND PRACTICES

A Risk Log will be maintained by the project manager and will be reviewed as a standing agenda item for project team meetings. In addition, a series of Computer-Aided Software Engineering (CASE) software tools will be used:

- Graphical Modelling Tools eg Visual Paradigm
- Debugging Environments and Integrated Development Environments
- Configuration management through GitHub version control
- Metrics and measurement : Lines of Code, Quality Plan
- Project Management : Gantt Chart and task checklists

RISK MANAGEMENT PLAN APPROVAL

The undersigned acknowledge they have reviewed the **Risk Management Plan** for the HouseHunt project. Changes to this Risk Management Plan will be coordinated with and approved by the undersigned or their designated representatives.

Signature:		Date:	25/9/2021
Print Name:	Tang Kai Wen, Alvin		
Title:			
Role:	Project Manager		

APPENDIX A: REFERENCES

The following table summarizes the documents referenced in this document.

Document Name and Version	Description	Location
Project Plan	Explain project scope and objectives.	http://155.69.100.27/3002s12122_TS7Team5/index.php/Main_Page
System Requirement Specification	Describe the features and behavior of the application..	http://155.69.100.27/3002s12122_TS7Team5/index.php/Main_Page
Quality Plan	A document on quality standards, metrics of activities relevant to the application	http://155.69.100.27/3002s12122_TS7Team5/index.php/Main_Page
Project Proposal	Describe the focus of the project, what problems it solves for target users, and the benefits of the application.	http://155.69.100.27/3002s12122_TS7Team5/index.php/Main_Page

APPENDIX B: KEY TERMS

The following table provides definitions for terms relevant to the Risk Management Plan.

Term	Definition
Activity	An activity is a term used by the SDN to distinguish a service that is provided by the SDN within a particular service that is being accessed by users. An example of an activity could be accessing a particular application, downloading training materials, uploading a data file. All of these activities, if performed for a particular branch or project, would be contained within one program within the SDN.
Budget	The approved estimate for the project or any work breakdown structure component or any schedule activity.
Contingency plan	A documented, organized, planned, and coordinated course of action to be followed if an identified risk escalates into a project issue.
Customer/User	The person or organization that will use the project's product.
Functional Requirements	Functional requirements specify Business Product features and what the Business Product must do. They are directly derived from the objectives defined in the Project Management Plan. A functional requirement is a tangible service, or function, that the Business Product must provide and is a non-technical requirement. how the Business Product should behave. See also Non-functional Requirements.
Goal	A one sentence definition of specifically what will be accomplished, while incorporating an event signifying completion.
Mitigation	Mitigation efforts attempt to prevent risks from developing into issues, or to reduce the effects of risks when they occur.
Project	A project is a temporary planned endeavor funded by an approved investment; thus achieving a specific goal and creating a unique product, service, or result. A project has a defined start and end point with specific objectives that, when attained signify completion.
Project Manager	The person assigned by the performing organization to achieve the project objectives. The Project Manager is responsible for project performance in relation to approved cost, schedule and performance baselines. The PM maintains information project status, control, performance, risk,

	corrective action and outlook. This person is accountable to the Business Owner for meeting business requirements and to IT governance for meeting IT project management requirements. The PM shall develop the business case in conjunction with the Business Owner to clearly define and capture business need requirements, conduct project planning to adequately define and execute the tasks required to meet approved cost, schedule and performance baselines and conform to HHS policies that apply to IT projects. Project Managers shall be responsible for timely reporting of significant variances from approved baselines and providing corrective action plans or rebaselining proposals as appropriate.
Requirement	A condition or capability that must be met or possessed by a system, product, service, result, or component to satisfy a contract, standard, specification, or other formally imposed documents. Requirements include the quantified and documented needs, wants, and expectations of the sponsor, customer, and other stakeholders (PMI PMBOK). Requirements specify what should be produced. They are descriptions of either how the Business Product should behave (functional requirements), or of how the Business Product must comply with laws, regulations, and standards (non-functional requirements).
Risk	A risk is defined as an uncertain event or condition that, if it occurs, has a positive or negative affect on a project's objectives. An uncertain event that may affect the performance objectives (i.e., cost, schedule, scope or quality) of an investment, usually negatively.
Risk Management	An approach for addressing the risks associated with investment. Risk management includes identification, analysis, prioritization, and control of risks. Especially critical are those techniques that help define preventative measures to reduce the probability of these factors from occurring and identify countermeasures to successfully deal with these constraints if they develop.

APPENDIX C: RISK LOG

Risk Type	Description	Occurrence	Severity	Probability	Rating	Strategy/ Plan
Tools	Possibility of single point of failure, like data corruption which can jeopardize the whole project.	High	Catastrophic	High	12	Modularity in programming to create independent units
People	Key team members are unavailable often at critical timings.	High	Serious	High	11	Plan few weeks in advance so that it can accommodate as many people
People	Required training for team members is not available due to time constraint.	High	Serious	High	11	Research online for tutorial and practices
People	Team members have limited experience in software development	Low	Insignificant	Low	4	Research online for tutorial and practices
Requirements	Difference between functional requirements documented and functional requirements developed.	Medium	Tolerable	Medium	8	Conduct weekly meetings to review requirements and functionalities
Estimation	Team members' limited experience can set unrealistic timeline for project thus causing a loss of control for project.	High	Serious	High	11	Implement deadline for each task allocated
Tools	Team members' limited experience and skillset can set unrealistic goals to functional requirements.	High	Serious	High	11	Ensure the application is available across different platform