

Risk Management Plan for Optimal Systems

Version 2

Team 10

March 7, 2023

Revision History

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| --- | --- | --- |
| Version | Description | Date |
| Version 1 | Added the description and approach for all risks associated to our product model. | 2/23/2023 |
| Version 2 | Added plan and status segments for all the risks present for our application. | 2/25/2023 |

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# Introduction

This document lists the project risks associated with the Optimal Systems project, and the plan for addressing each risk. This document will be updated during the project when the status or plan changes for existing risks, or when new risks are identified.

# Risk Register

| Risk # | Description | Approach  (Avoid, Contain, Mitigate, Evade) | Plan | Status  (Open, Closed) |
| --- | --- | --- | --- | --- |
| 1 | Will there be enough customers? | Mitigate | To determine the amount of customer traffic, we will perform marketing analysis for both e-commerce platforms and private businesses because this will help to clarify the association between the customers who are willing to shop online from private stores, and the minimum number of customers required per day to achieve the daily customer goal. For example, if Lucky 7 earns $25,000 in January, then $25,000 divided by 30 is $830, which represents the per-day revenue. Hence, if one customer on average spends a minimum of $20 per day, then $830 divided by $20 is approximately 40. So, the minimum number of customers per day would be 40 to achieve a monthly revenue of $25,000.  Therefore, this analysis approach will be applied monthly to calculate the minimum number of customers needed to ensure that the profit keeps increasing every month. In addition, marketing analysis will also help our group to incorporate new features that are not present among other e-commerce platforms. | Open |
| 2 | Will MySQL be able to hold all the data? | Mitigate | To check if MySQL is compatible to hold inventory and customer records, we will perform tests with arbitrary (random) data by inserting 100 to 200 data records into the database to ensure that the database can hold all the data and that there is no data leakage due to overloading of MySQL storage capacity.  The arbitrary data used for testing will include the serial number, quantity, and price for inventory products. Similarly, attributes like name, home address, phone number, and bank card number will be used for online customers.  Therefore, if MySQL securely holds all the arbitrary data, then our team will continue using MySQL to store data records, and if storage capacity is exceeded in MySQL, then our team will use Google Firebase because it can hold hundreds of data due to inbuilt storage and insertion formulations. | Open |
| 3 | Will the business owner be able to hire delivery drivers? | Mitigate | If Mr. Alex is not able to hire enough delivery drivers, then our team will allocate drivers to ensure that no problems would appear regarding driver shortages. In addition, the drivers hired by our team will be paid monthly based on the Lucky 7 store’s overall monthly revenue. | Open |
| 4 | Will the delivery drivers have their personal cars available for delivery? | Mitigate | If drivers hired through Mr. Alex or our team do not have their cars for delivery, then our team will collaborate with a car rental agency named ACE to provide SUV cars for delivery. The cost of these cars will be paid monthly from the business's overall monthly revenue. | Open |
| 5 | Since we are utilizing HTML and MySQL for the first time, will our team be able to deliver all the complex functionalities, like voice search and data insertions on time? | Mitigate | To learn HTML and JavaScript programming, our team members will take part in HTML training modules offered through online websites to ensure that we learn the basics of HTML to help build a dynamic e-commerce website.  In addition, to learn about MySQL, we will perform practice tasks for data insertion, retrieval, and modification to ensure that the database connections are accurate and that the data is also being altered in the database accordingly. | Open |
| 6 | If the software has bugs and incorrect database connections, then how will this be managed? | Mitigate | Since this will be the initial release of our shopping website, the probability of having software bugs will increase because there are no prior user experiences to provide feedback about bugs. So, to resolve this, our team will perform rigorous testing for both website and database functionalities to ensure that what the user does from their side (front side), gets securely transmitted through our system.  For testing, our team will check if all functions, like shopping cart, navigation, and voice search work as intended by inserting arbitrary data. In addition, incorrect data will also be entered during the testing phases to ensure that the software can recognize those errors and if it alerts the user accordingly. | Open |
| 7 | What if someone gets sick in our team, how will the workflow be maintained in that situation? | Mitigate | If someone gets sick, then we will have a formal Zoom meeting to equally divide that team member’s tasks among others to ensure consistent productivity. In addition, as the group completes the new task assigned, then they will be required to provide an extensive summary of what functionalities they added or altered, to ensure that when the team member recovers, they will have a clear understanding of how and what is done for their part of the tasks, so from there they can continue the workflow. | Open |
| 8 | If someone from our team travels to another state, then how will they communicate and continue their tasks? | Mitigate | All the documents and source code for the project will be placed in GitHub to maximize collaboration and efficiency.  Thus, if a team member needs to travel for personal reasons, then they will continue their assigned tasks remotely. For example, they will use GitHub to access code and documents. In addition, if that member has any questions regarding their task, or if they need help to complete a task, then we will use the Zoom meeting platform for collaboration, so the level of productivity stays consistent. Lastly, if that member is not able to participate during their traveling period, then all team members will have a formal meeting through Zoom to ensure that tasks are equally divided among other team members. | Open |
| 9 | Will our team be able to recover the profits from the overall monthly revenue of the store? | Evade | Since the monthly revenue for Lucky 7 and customer traffic will vary, so our team can only ensure to have the minimum number of daily customers, and to keep updating the website’s functionalities. | Open |
| 10 | How will we compete with other platforms, such as Square Space and Go Daddy? | Mitigate | Square Space and Go Daddy platforms require their customers to pay a monthly fee of $25 to $30. In addition, these platforms offer limited categories from which users can select their features, security, and templates. Thus, to compete, we will make our application’s software free, and all users will have access to unlimited features because our website will not be made using categorized templates, instead, we will build the site based on the user's interests, which will help to increase customizability factor.  Our team will also offer in-person support because instead of integrating a call or email system, we believe that when our customers are given personal time and attention, then this helps to increase trust for long-term association.  Lastly, our team will perform user analysis to gather insights regarding what users think about other platforms like Square Space because we will get exposure to those features that users are missing from their sites. Therefore, we will use the results from the survey to implement all the necessary features that customers want to interact with. | Open |