Vendomatic Project

Project Plan

Version 1.4

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Revision History

Version	Description	Author	Date
0.1	● Draft	Ezgi Özkan	2023-03-26
0.2	● Review ● Extend sections	Kadir Kılıçoğlu Tuğçe Sözer	2023-03-29
1.0	● Polish and publish	Ezgi Özkan Kadir Kılıçoğlu Tuğçe Sözer	2023-04-02
1.1	● Correction of wrong specification for the iteration numbers in section 3- Project Practices and Measurement ● Add use case names explicitly in the table provided in section 4- Project Milestones and Objectives. ● Add transition iteration in the table provided under 4- Project Milestones and Objectives. ● Explanation for team structure is added in section 2- Project Organization	Ezgi Özkan Kadir Kılıçoğlu Tuğçe Sözer	2023-04-09
1.2	● Lessons Learnt section is updated	Tuğçe Sözer	2023-04-30
1.3	● Lessons Learnt section is updated ● Update implementation items	Tuğçe Sözer	2023-04-30
1.4	● Lessons Learnt section is updated	Ezgi Özkan Kadir Kılıçoğlu Tuğçe Sözer	2023-06-04

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1. Introduction

Vendomatic is a software application that aims to improve the vending experience by providing connectivity, easy discovery of nearby vending machines, remote manageability, and a mobile application for customers. With Vendomatic, vending machine users can easily find nearby vending machines, view product availability and make purchases through their mobile devices. Vending machine owners can remotely manage their machines, including inventory management, sales reporting, and machine diagnostics, making it easier to operate and maintain vending machines.

This project plan outlines the organization, practices, and measurements that will be utilized, as well as the milestones, objectives, deployment methods, and lessons learned for the project. Its purpose is to provide a draft of the project plan.

2. Project Organization

In this project, scrum-based structure is adopted where cross-functional teams are formed to work for all responsibilities listed below to deliver a high quality product.

Role	Responsibility	Assignee
Project Manager	● Oversees the project planning process. ● Manages communication and collaboration with stakeholders. ● Ensures that the project team is committed to achieving the project goals.	Ezgi Özkan Kadir Kılıçoğlu Tuğçe Sözer
Business Analyst	● Gathers input from stakeholders and understand the problem that needs to be solved. ● Represents the concerns of the customer and end-users by setting priorities for requirements and capturing them.	Ezgi Özkan Kadir Kılıçoğlu Tuğçe Sözer
Developer	● Fulfills coding activities according to the requirements. ● Writes and performs tests.	Ezgi Özkan Kadir Kılıçoğlu Tuğçe Sözer
QA	● Provides feedback on the product quality. ● Creates quality metrics.	Ezgi Özkan Kadir Kılıçoğlu Tuğçe Sözer
Marketing	● Creates and shares relevant and informative content on websites, blogs, and social media platforms. ● Sets up a booth or demo area to demonstrate the	Code Busters Marketing Department

	features of Vendomatic to potential customers. ● Encourages existing customers to refer others to Vendomatic through offering incentives, such as discounts or free upgrades. ● Arranges partnerships with industry influencers or experts can help Vendomatic to reach a wider audience and establish credibility.	

3. Project Practices and Measurement

This project will utilize an iterative development approach with time-boxed iterations, including one inception, two elaboration, one construction, and one transition phase. Use cases will be defined as product backlogs and prioritized for each iteration in an iteration plan.

Unit testing will be the responsibility of the developer, while the QA team will independently create and conduct system tests. GitHub will be used for configuration management, with changes reviewed by the development team and documented.

Daily scrum meetings will be held, and weekly meetings with the customer will occur to discuss progress and potential needs. Iteration progress will be tracked through metrics, including velocity and defect density, with goals set at the start of each iteration and measured at the end.

4. Project Milestones and Objectives

Iteration	Primary Objectives *(Risks and UC Scenarios)*	Scheduled Time Frame	Target Velocity
Iteration-1 *Inception*	● Produce the initial Vision document. ● Produce the initial Glossary document. ● Produce the initial Use Cases document ● Produce the initial Work Items List. ● Produce the initial Risk List. ● Produce the initial Project Plan. ● Produce the Iteration Plan for iterations 1 and 2. ● Produce the initial System-Wide Requirements document. ● Produce the initial Use Case Model document. ● Finalize the Vision document.. ● Research for tools and technologies to be used within the project.	**S:**2023-03-16 **E:**2023-04-07	170 p/hrs ~33 SP
Iteration-2 *Elaboration*	● Update the Glossary document. ● Update the Use Cases document ● Update the Work Items List.	**S:**2023-04-08 **E:**2023-04-27	126 p/hrs ~23 SP

	● Update the Risk List. ● Update the Project Plan. ● Produce the Iteration Plan for iteration 3. ● Prepare the infrastructure. ● Prepare test documents. ● Implement UC-01 (Login to Web Application). ● Implement UC-08 (Register to Mobile Application). ● Implement UC-09 (Login to Mobile Application). ● Conduct fundamental system tests.		
Iteration-3 *Elaboration*	● Update the Project documents. ● Produce the Iteration Plan for iteration 4. ● Prepare test documents. ● Backend implementation UC-02 (Manage Operators). ● Backend implementation (Manage Vending Machines). ● Backend implementation (Manage Products). ● Backend implementation (Manage Inventory). ● Conduct fundamental system tests.	**S:**2023-04-28 **E:**2023-05-18	128 p/hrs ~23 SP
Iteration-4 *Construction*	● Update the Project documents. ● Produce the Iteration Plan for iteration 5. ● Prepare test documents. ● Implement UC-10 (Search/Filter Products and Vending Machines). ● Implement UC-11 (Rate Products and Vending Machines). ● Conduct fundamental system tests. ● Enhance previously implemented features.	**S:**2023-05-19 **E:**2023-06-08	126 p/hrs ~23 SP
Iteration-5 *Transition*	● Update the Project documents. ● Prepare test documents. ● Implement UC-6 (Access Sales Analytics). ● Implement UC-7 (Manage Maintenance Alerts). ● Conduct fundamental system tests. ● Enhance previously implemented features.	**S:**2023-06-09 **E:**2023-06-29	126 p/hrs ~23 SP

5. Deployment

The recreate deployment strategy will be used as a software deployment approach that involves tearing down the existing environment and deploying a completely new version of the software.

This strategy is used when there are major changes in the software that make it difficult or impractical to upgrade the existing environment. In a recreate deployment strategy, the existing environment is destroyed and replaced with a new environment that includes the updated software.

6. Lessons Learnt

This session is going to be expanded as the project progresses.

Lesson ID	Description
L1	Do not leave any broken windows. Diligence even in draft documents motivates the team to produce higher-quality artifacts.
L2	Iterations matter. Work in iterations when producing as with every iteration, the author will have a wider view, better understanding and cleaner ideas on the outcome. This is valid for both software and documents.
L3	Ongoing project documentation is very important. By documenting each step of the process, the team can more easily identify issues, track progress, and ensure that all team members are on the same page.
L4	Separation of front-end and back-end efforts matter. An API does not require a UI to be verified and to be functional, so plan the effort carefully.
L5	Live documents are important. Keeping documents fully separated from the project results quickly in decoupled and deprecated documents.
L6	Start with a simple implementation and incrementally increase the complexity as it requires.
L7	Effective use of Open Unified Process is crucial. Follow the Open Unified Process methodology, which emphasizes iterative development and continuous feedback. Regularly review and update the project artifacts, including

	requirements, design, and documentation, to adapt to changing needs and ensure alignment with stakeholders.
L8	Error handling and logging is essential. Implement robust error handling and logging mechanisms throughout the application. Properly handle exceptions, log relevant information, and provide meaningful error messages to assist in troubleshooting and debugging.
L9	Testing and QA is very important. Incorporate a comprehensive testing strategy, including unit testing, integration testing, and end-to-end testing, to ensure the reliability and functionality of the application. Employ automated testing frameworks and tools to streamline the testing process.
L10	Pay attention to database design and performance. Design the database schema efficiently, considering the specific needs of the application. Optimize queries and indexes to enhance performance. Regularly monitor and tune the database to ensure it can handle the expected load.
L11	Leveraging container technology makes life easier. Utilize Docker to containerize the application components, making it easier to deploy, manage, and scale the application across different environments.
L12	Pay attention to security aspects, especially when dealing with sensitive user information or financial transactions. Implement secure coding practices, data encryption, and appropriate authentication and authorization mechanisms to protect against potential vulnerabilities.
L13	Cross-platform development technologies such as Flutter Flow make the development process efficient and faster. Leverage such kinds of technologies by using visual development capabilities to create a cross-platform user interface for the application. Utilize its built-in components, interactions, and workflows to create a seamless and consistent user experience across platforms.