CODE-LOGIK
Crafting Cutting-Edge Software

THE WILLOW TREE OMS

CS4233 CAPSTONE PROJECT 2024

PROJECT PROPOSAL

PREPARED BY:

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PROJECT OVERVIEW

PROJECT NAME: The Willow Tree OMS
PROJECT REFERENCE: CS4233 CAPSTONE PROJECT 2024
DATE: 23 JAN 2024

The Willow Tree's current Order Management System (OMS) allows customers to place orders at the table via a kiosk.

Although the current release is functional, the OMS has been facing intermittent performance and security issues due to its software's website-based deployment. A redesign is necessary to improve the performance and better secure data.

The current OMS software performance is impacted by circumstances extending beyond The Willow Tree's scope of business; the hosted source code is also vulnerable to random and targeted security threats and requires a redesign to protect the integrity of The Willow Tree's day-to-day operations.

Code-Logik proposes rebuilding the OMS into a desktop application to accommodate the highly interactive usage expected in a restaurant setting. Having the OMS deployed as a desktop application will improve stability and overall performance and reduce the possible footholds available to potential security threats.

The proposal aims to deliver The Willow Tree a secure, stable, high-performance OMS capable of keeping pace with restaurant business demands while providing the customer with the best possible dining experience.

Code-Logik estimates that it will take approximately 13 weeks to complete the redesign of The Willow Tree OMS.

SCOPE OF WORK

With The Willow Tree's approval, Code-Logik will perform the following scope of work to redesign the current OMS:

- Rebuild the Website Front-End using the Windows Presentation Foundation Graphical Subsystem.
- Migrate and update the menu items embedded in the JavaScript source code into a JSON database to create a customizable, fully dynamic OMS.
- Translate and improve the Server Back-End logic using C Sharp.

TIMELINE

The scope of work will follow a five-phase structured process typical of the Software Development Life Cycle (SDLC). Figure 1 details the expected timeline for each phase of the SDLC.

Phases	Date of Phases (by Weeks)												
1. Requirements Analysis													
2. Modeling													
3. Testing													
4. Source Code													
5. Published on GitHub													
	02	09	16	23	01	08	15	22	29	05	12	19	29
	February				March					April			

Figure 1 Expected Timeline for Software Development Life Cycle.

Phase Objectives:

1. **Requirements Analysis:** gathering, evaluating, and documenting the requirements to redesign the OMS will take approximately two weeks.
2. **Modeling:** systematically organizing abstractions of key OMS components for decision-making purposes will take approximately four weeks.

3. **Testing:** verifying key OMS components and validating redesign requirements will take approximately eight weeks.

4. **Source Code:** creating standardized, understandable, and documented source code will take approximately eight weeks.

5. **Published on GitHub:** Delivering requirements met redesigned OMS software via GitHub will take approximately two weeks.

BUDGET

The estimated budget for this project is $25,000. The budget includes all requirements analysis, modeling, testing, source code, and publishing costs.

TEAM MEMBERS

Mark Sarasua, Jr. will be the sole developer on this project and will fulfill all roles and responsibilities.

RISK MANAGEMENT PLAN

Risk identification and assessment will occur during phase 1 of the SDLC, and a risk register will document the results. Regular updates to the risk register will occur throughout the SDLC. The risk register will include a mitigation plan for each risk listed.

QUALITY ASSURANCE PLAN

To ensure the redesigned OMS software meets the requirements and expectations of The Willow Tree and its customers, throughout the SDLC, use of various quality assurance and quality control activities such as code analysis, unit testing, integration testing, system testing, user acceptance testing, and issue tracking will take place during all phases where appropriate.

ACCEPTANCE CRITERIA

Functional Requirements: The user interface should dynamically adjust to the menu items in the database.

Performance Requirements: The software should perform consistently.

Usability Requirements: The user interface should be aesthetically pleasing.

Security Requirements: The database of menu items should be protected against unauthorized access.

Compatibility Requirements: The software should be compatible with industry-standard operating system environments.

Maintenance Requirements: The software should be easy to support and update.

CONCLUSION

This project aims to redesign the Order Management System from a website-based into a desktop-based application. The current OMS is functional; however, the customers' dining experience continues to suffer with intermittent performance and security issues. Code-Logik will redesign the OMS into a secure, stable, high-performance application that will undoubtedly provide The Willow Tree's customers with the best possible dining experience.

Once the proposal is approved, Code-Logik will start "Crafting Cutting-Edge Software" for The Willow Tree.

For further details and information, please contact:

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