<Chat\_Away>

# Software Design Template

Version 1.0

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## Document Revision History

| Version | Date | Author | Comments |
| --- | --- | --- | --- |
| 1.0 | 09.07.2023 | <Christopher Irving> | < Chat Away seeks to broaden its customer base through the introduction of a mobile application.> |

Instructions: Fill in all bracketed information on page one (the cover page), in the Document Revision History table, in the footer, and below each header. Under each header, remove the bracketed prompt and write your own paragraph response covering the indicated information.

## Executive Summary

*<* Chat-Away is a thriving social media company with a robust web presence. To further extend their success, the company aims to develop a mobile application accessible to both iPhone and Android users. By offering this app to a wider audience, Chat-Away hopes to not only bolster revenue but also cultivate a larger user base. *>*

## Requirements

*<* Chat-Away's objective is to create a platform that accommodates smartphone users with varying budget constraints. The company aims to expand its consumer base and boost revenue. *>*

## Design Constraints

*<* To align with the client's objectives, the project is structured around three primary design constraints:

* **Budgetary Restraints:** The project must adhere to the client's fixed budget.
* **Cross-Platform Accessibility:** Chat-Away aspires to cater to all smartphone users, prioritizing the expansion of its fan base and revenue.
* **Development Timeline:** Creating an app for both Android and Apple devices may necessitate additional time due to varying screen sizes, different software versions, and debugging efforts. These factors need careful consideration to deliver a quality product within budgetary limits.*>*

## Rationale

*<* Within each design constraint, time management emerges as a critical concern. Android's diverse range of screen sizes and the prevalence of outdated software among users poses challenges. Selecting the optimal version that caters to the broadest user base is vital for achieving revenue growth. Furthermore, the development of an application compatible with both Apple and Android entails thorough testing, bug resolution, and meticulous attention to detail, all of which must align with the client's budget. These complexities may introduce some risk, potentially leading to delays and requiring the team to operate efficiently if budget constraints are stringent *>*

| **Development Requirements** | **Windows** | **Linux** | **Mac** | **Mobile** |
| --- | --- | --- | --- | --- |
| **Server Side** | The server-side aspect can be cost-intensive. It features a user-friendly graphical user interface (GUI) and provides access to a command prompt. | Cost-effective. The platform can be challenging to navigate, but it offers a command shell for straightforward server configuration and accessibility. | The Mac platform offers convenient accessibility and server configuration options, featuring a user-friendly graphical interface that simplifies operations. Furthermore, it supports versatile terminal commands, enhancing flexibility in system management. | Specifications are superior in alternative devices. Mobile device specifications differ based on individual user preferences and requirements. |
| **Client Side** | It tends to be pricier compared to Linux systems. Windows systems are relatively straightforward to learn and understand for supporting a setup, requiring minimal expertise. | Considerable expertise and time investment are necessary. Proficiency in Linux is a prerequisite for operating the system. Linux users may face higher associated costs. | It can be costly for users. It demands a moderate investment of time and expertise. Accurate skills are necessary to effectively navigate the OS. | It offers clients and developers the flexibility to access updates from anywhere. Implementation can be somewhat more challenging compared to other devices. |
| **Development Tools** | These languages encompass HTML, CSS, and JavaScript. There are libraries available to support frontend development as well as various programming languages. Developer tools, such as Eclipse, the command prompt, PyCharm, and others, are also instrumental in the development process. | These languages encompass HTML, CSS, and JavaScript. Libraries are available to bolster frontend development and various programming languages, including JavaScript, Ruby, PHP, and Python, are part of the Linux system's repertoire. | These languages encompass HTML, CSS, and JavaScript. There are libraries available to bolster frontend development. Additionally, various development tools such as PyCharm, GitHub, Visual Studio, and more are at your disposal. | These languages include HTML, CSS, and JavaScript. There are libraries available to bolster frontend development and support various programming languages such as HTML, PHP, C++, and Python. Integrated Development Environments (IDEs) are available for programming in these languages. |

**Recommendations**

< Choice of Operating Platform for Expanding Draw It or Lose It:

To facilitate the expansion of Draw It or Lose It into diverse computing environments, Windows emerges as the most suitable operating platform. This preference is primarily attributed to the extensive availability of Integrated Development Environments (IDEs), ensuring a robust ecosystem for further development.

Microsoft Windows Operating System Architecture:

Microsoft Windows stands as a comprehensive graphical operating system, meticulously developed and distributed by Microsoft. This multifaceted system not only serves as a repository for files but also supports diverse software applications, offers a platform for gaming, enables seamless video playback, and provides internet connectivity.

Effective Storage Management on Windows 10:

Windows 10 introduces an indispensable feature known as "Storage Sense," empowering users to meticulously oversee and manage their hard drive contents. This functionality grants users the ability to scrutinize their files and gauge the space occupied by each, simplifying storage management.

Efficient Memory Management for Draw It or Lose It:

Leveraging Windows 10's "Storage Sense" is a strategic choice for managing the storage and memory of Draw It or Lose It, including user-generated photos and gaming data. The tool allows for the consolidation of these assets in a secure, organized memory space.

Distributed Systems and Network Integration:

In the realm of network-based, multi-user interaction systems, particularly in the context of network games, a shared database serves as the linchpin. This shared database connects physically dispersed players who interact with each other via network communication. Presently, developers of network games often find themselves crafting these shared databases and inter-player communication systems from the ground up.

Enhancing Security Measures:

Windows operating systems are equipped with built-in security protection software, contributing to the overall safeguarding of user data and information. However, for a comprehensive approach to fortifying data security, it is advisable to explore additional security solutions from external sources.>