**CS3337 – Software Engineering**

**Project Proposal**

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**Project 1: Online Appointment Booking System**

**Situation:**

A local healthcare clinic is facing issues with manual appointment scheduling. They want a more efficient way to manage patient appointments and reduce administrative workload.

**Customer**: Any business that books appointments, including hospitals, dentists, Hair/Nail salons, etc.

**Target:**

Develop an online appointment booking system that allows patients to schedule & cancel appointments, see available time slots, and perform scheduling efficiently. A reminder system will message users via text/email/push notifications and ask for confirmation to minimize no-shows.

**Option 1: Mobile App Solution**

**Solution**: Create a mobile app for patients to book appointments. Include features for selecting a specific attendee, specifying appointment times, and receiving appointment confirmations.

**Pros:**

* Provides a user-friendly and convenient way for patients to book appointments.
* Push notifications can be used for appointment reminders.

**Cons:**

* Requires development effort for multiple mobile platforms (iOS and Android).
* Patients need to install and update the app.
* Desktop not supported

**Option 2: Web App Solution**

**Situation:** Develop a responsive website with a user-friendly interface for appointment scheduling. Patients can access it through web browsers on various devices.

**Pros:**

* Universally accessible without the need for app installations.
* Easier to maintain with a single codebase.

**Cons:**

* May not provide as seamless user experience as a mobile app.

**Proposal:** Option 2 (Web App Solution) is proposed because it provides broader accessibility and is easier to maintain. Since users often access websites from various devices, a responsive website will cater to a wider audience. It can also be integrated with the business's existing systems for appointment management.

**Product Name:** "HealthBook"

**Platform:** Web Application

**Database Content**: attendee/user information, appointment date/time, meeting details, appointment records.

**System Interface**: UI will have a visual calendar format that has daily & weekly modes, placing appointments into hourly blocks. Tabs and buttons will present data in expanded/compact modes.

Readability & intuitive UX will be prioritized.

**Project 2: Inventory Management System**

**Situation**:

A retail store is struggling with inventory management, leading to overstock and understock situations. They need a system to track inventory levels accurately.

**Customer**: store owners and staff. Businesses or organizations with inventory.

**Target:**

Develop an inventory management system that logs input, output, & stock of products. Communicates with the PoS to record sales and returns.

**Option 1: Desktop Application Solution**

**Solution:** Build a desktop application that store employees can use to update inventory in real-time, manage restocking, and generate inventory reports.

**Pros:**

* Provides a dedicated and offline solution.
* Can be tailored to the store's specific needs.

**Cons:**

* Limited accessibility to store employees on-site.
* May require additional effort for cross-platform compatibility.

**Option 2: Cloud-Based Web Application Solution**

**Solution:** Create a cloud-based web application accessible from any device with an internet connection. Include features for real-time inventory updates, restocking alerts, and comprehensive reporting.

**Pros:**

* Offers accessibility from anywhere, enabling remote management.
* Easier to update and maintain without the need for installations.

**Cons:**

* Requires a reliable internet connection for access.
* May rely on other services.

**Proposal:** Option 2 (Cloud-Based Application Solution) might be better because it provides more flexibility in terms of accessibility and easier maintenance. This solution can be accessed from any device with an internet connection, allowing for remote inventory management and scalability.

**Product Name**: "StockSavvy"

**Platform**: Cloud-based Web Application

**Database Content**: Product details, inventory levels, sales records, supplier information.

**Interface**: UI will clearly state the amount of product. Low inventory will be flagged for restock. The Minimum Viable Product will search by SKU or product name. Nice-to-haves would be various options to display/hide/search product properties & for a reorder menu to suggest product restocking & connect to dedicated vendors to do so.