Project Documentation

**< HomeCare EMR >**

Department of Computer System Technology

CSTP 2204: IT Development Project

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**Motivation**

The issue at hand that we are dedicated to addressing revolves around enhancing both the operational efficiency and the overall quality of life for our esteemed home care nursing professionals.

# Requirements

**Core Features:**

**Patient's Database:**

The development and maintenance of a comprehensive patient database are integral to the success of our healthcare software. This feature ensures the efficient storage, retrieval, and management of patient records, enabling healthcare providers to access critical patient information swiftly and securely.

**Patient's Task (Including Vital Sign and Medication Monitoring):**

This multifaceted feature encompasses tasks related to patient care, such as monitoring vital signs and medication schedules. It facilitates healthcare professionals in tracking and managing patient health, thereby improving the quality of care and patient outcomes.

**GPS Tracker:**

The GPS tracking functionality enhances patient safety and caregiver efficiency. This feature allows real-time monitoring of patients' locations, enabling timely intervention in case of emergencies or deviations from planned routes, particularly beneficial for home healthcare or remote monitoring scenarios.

Mileage Log Tracker:

An essential feature for healthcare providers who offer mobile services. It helps in recording and reporting travel distances, ensuring accurate reimbursement for mileage expenses and compliance with regulatory requirements.

**Order Medication and Supplies: (**

Streamlining the ordering process for medication and medical supplies is crucial for healthcare organizations. This feature simplifies the procurement process, reducing errors and ensuring timely availability of essential resources for patient care.

**Extra Features**

* Format the Patient's Report: The formatting of patient reports can significantly enhance the clarity and professionalism of healthcare documentation. While it's on the roadmap, its delivery depends on available development time and priorities.
* Chart Image for Patient’s Vital Sign: Creating visual representations of patients' vital signs through charts or graphs can aid healthcare providers in better understanding trends and patterns. The implementation of this feature is contingent upon the project timeline and resource allocation.

**Removed Features Due to Time Constraints:**

* Android and iOS Versions: Developing dedicated mobile applications for Android and iOS platforms is a substantial undertaking. Given our current focus and resource constraints, these mobile versions are deferred for future consideration.
* Billing and Payroll: Billing and payroll functionalities are critical but complex components of healthcare software. Due to time limitations, these features will not be part of the initial release. However, they remain under consideration for future iterations or expansions of the software.

In conclusion, our commitment lies in delivering core features that are fundamental to patient care and data management. Additional functionalities will be pursued based on available resources and project timelines, while more extensive features like mobile applications and financial components are postponed for strategic evaluation at a later stage. This approach ensures the efficient development and deployment of our healthcare software while maintaining flexibility for future enhancements.

**Design Choices**

We are making a hi-fi wireframe to demonstrate our design choices, it is still in process now, link to our Lo-Fi Wireframe: <https://github.com/billkuo08/CSTP2204-HomeCareEMR/tree/main/LoFi_WireFrame>

**Open Questions**

Topics needing clarification:

Topics needing a decision: UX Design, for example the color scheme we want to implement etc.

**Project Risks**

* Ensuring and upholding the strictest levels of patient confidentiality stands as a paramount concern within our operational framework, underscoring our unwavering commitment to safeguarding sensitive medical information.
* The reliability and precision of our GPS tracking system are contingent upon the judicious selection of the geographical mapping infrastructure that we opt to integrate into our platform. The meticulous choice of mapping resources plays a pivotal role in determining the efficacy and dependability of our location-based services.

**Dependencies**

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| --- |
| * Netlify |
| * Firebase |
| * MUI |

**Technical Stack**

Frontend

* React.js, HTML, CSS, MUI

Backend

* Firebase

Database

* Non-SQL

**Project Plan**

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| --- | --- | --- | --- |
| **Task** | **Assigned to** | **Estimate** | **Due Date** |
| Design Patient's data format | Mark |  | Sept 30th |
| Wire Flow | Mark |  | Sept 21st |
| Find ui comparrison on competitor apps | Jericho |  | Sept 21st |
| Wireframe | Jericho | Sept 22nd // https://www.figma.com/file/grlBv0pT3J4r5nhFS8a9yQ/Tracking-Map-Application-(Community)?type=design&node-id=8-2396&mode=design&t=vGLpsp1TDsPhQdht-0 | Sept 30th |
| Decide and research on Map API | Bill | Sept 23rd | Sept 23rd |
| Research on GPS tracker with JavaScript | Bill | Sept 25th | Sept 26th |
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