JnJ’s Clockwork

Software and Hardware Specification Sheet

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Declaration of Sole Ownership

Proposal

Abstract

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Introduction

Technical Problem

Scope of Report and Procedures Used

The system is based on a database where the application goes hand in hand with the clockwork itself. A database will be established by us supporting the application through reading and writing temperature values and vibration features.

Purpose of Project/Objective

The purpose of the notification device is to alarm the user more effectively and to create a portable and ease of access application for consumers who are trying to get notified on time. (Something here). All in all, the project is to provide an effective experience when receiving notifications from the device.

Problems Encountered

With a snooze button in the application, this can be abused by the user where the clockwork would insufficiently notify the user. Customers can also turn off their bluetooth provided in their mobile devices, which would ultimately disable the system.

Unique Approaches

Body

Requirement Specifications

Hardware

The project utilizes the following hardware components:

- Raspberry Pi 3 B +

- Micro USB power adapter
- 8GB micro SD card for storage
- HTU21D-F Humidity/Temp Sensor (0x40)
- DRV2605 Haptic Motor Driver (0x5A)
- Display screen
- 3D printed materials for hardware enclosure
- PCB components for sensor connections
- Android smartphone

Software

The project utilizes the following software components:

- Smartphone capable of running Android API 21 or higher
- Up to date version of Android Studio
- up to date version of Raspbian OS for the Pi 3
- Mobile application created to work alongside hardware component
- Firebase communication for storing user information and desired information

Work Breakdown

Database

The database will be designed, created and upheld by Juan and Johnson. The database connection is already established and connected to the mobile application. Readings from the sensor to the database are also required.

Mobile Application

The android application will be developed and maintained by Juan and Johnson. Add ons and additional functionality will be incorporated with the help from Jordan. The app is mostly complete in its current state. The only things that are left to work on is bluetooth functionality and debugging. The app needs to respond to the hardware in order to display desired information from the application.

Hardware

The hardware portion of this project will be a joint effort between each member of the group as there are many responsibilities in order for everything to function as intended. In terms of the hardware design and enclosure, it will be handled by Juan. The functionality of each sensor will be tested and operational mainly from Jordan with help from Johnson when required. Connections between sensors and the Raspberry Pi will be accomplished by Johnson. The Integration of components may require additional help from every member due to problems that may occur during development.

Background

Problem

Solution

Conclusion

Recommendations

Bibliography