Digital Watch Project PO2_DGW

Table 1 status table

Document	Author	Version	Update Date	Status
CRS	Rasha Samuel	1.2	11/3/2023	proposed

Table 2 Document history

Version	Description of Change	Author	Date of last update	Status
1.0	- Initial creation of the document.	Rasha Samuel	8/2/2023	Draft
1.1	- update CRS according to review	Rasha Samuel	15/2/2023	Draft

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1. INTRODUCTION

Digital watches are common now a days, digital watches show the time as numbers, e.g., 10:55 Am instead of a shorthand pointing towards the number 10 and a long hand pointing towards the number 11. The digits are usually shown as a seven-segment display or a LCD display. Sometimes this digital watch includes some extra features besides displaying the time in numbers format, e.g., lighting the display, stopwatch, alarm, and more other features depending on the manufacturer.

1.1 Project Description

This project will reference a Digital-Watch including several implemented features e.g. displaying a digital format of the current time to the user, setting alarm times that triggers a buzzer when the time hits the set time, stop watch that helps the user to count time according to his requirements and in this document "Customer Requirement Specifications (CRS) document" the basic CRS requirements will be specified into software and hardware more detailed requirements.

2. SW Context

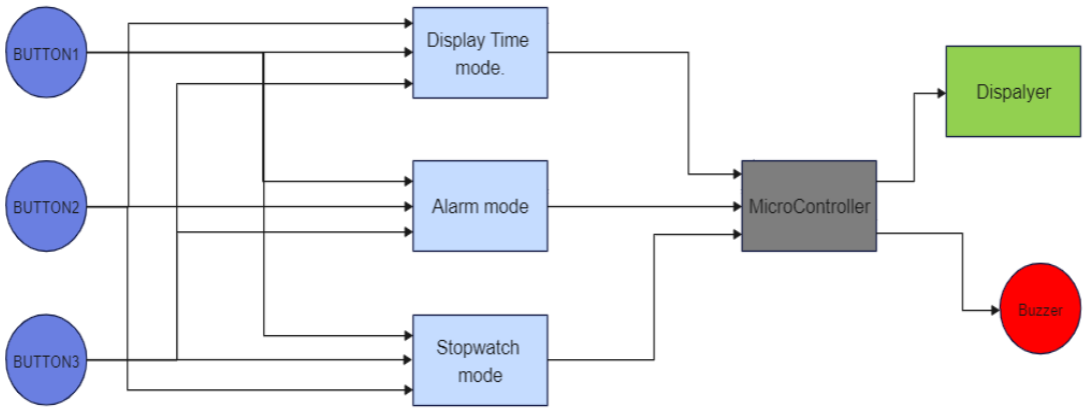

Figure 1Digital-Watch SW Context Diagram

3. REQUIREMENTS

3.1 Display Time mode.

The System shall display the current time in this format (HH/MM/SS Am/Pm) on a displayer if the Time-display mode is chosen.

- Pressing button 3 (one time) allows the user to be in normal mode(Display Time).
- pressing button 2 allows the user to set the minutes by pressing button 1 (each press= min++)
- pressing button 2 again allows the user to set the hours by pressing button 1 (each press= hr.++)
- It switches between AM or PM automatically after 12.

3.2 Alarm mode.

The System shall notify the user with a buzzer when the settled alarm time arrives if the alarm mode is chosen

- Pressing button 3 (two times) allows the user to set an alarm.
- pressing button 2 allows the user to set the minutes by pressing button 1 (each press= min++)
- pressing button 2 allows the user to set the hours by pressing button 1 (each press= hr.++)
- It switches between AM or PM automatically after 12.

3.3 Stopwatch mode.

The System shall start counting time referring to real time seconds, minutes and hours if the start in the Stopwatch mode is chosen

- Pressing button 3 (three times) allows the user to set the stopwatch.
- pressing button 1 to reset.
- pressing button 2 to start.
- pressing button 2 again to stop.

Table 3 Reference table

Reference Input Documents	Version	Status
CRS	1.2	Proposed
SIQ	1.1	Released