

CRS

Hardware Requirements

[REQ#]	Hardware Characteristics
REQ1	LCD to display the time.
REQ2	Buttons to switch between modes and control the watch
REQ3	ATMEGA32
REQ4	RTC DS1307
REQ5	5V Lithium Battery

User Requirements

[REQ#]	Title
REQ1	The software shall allow the user to set the time by setting the hours and minutes
REQ2	Display the time with 12 AM/PM format
REQ3	The software shall allow the user to set the alarm
REQ4	The software shall allow the user to set the stopwatch

Input and Output Requirements

[REQ#]	Input Requirements
REQ1	The software shall allow the user to set the time (hours and minutes).
REQ2	The software shall allow the user to choose between modes

[REQ#]	Output Requirements
REQ1	The software shall Alert the user on time

//AS a functional and non-functional

Functional Requirements

[REQ#]	Title
Display Time	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
Alarm	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
Stopwatch	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

Non-Functional Requirements

[REQ#]	Title
REQ1	Display Time mode which provides the core services and controls the watch.
REQ2	Alarm mode that saves alarm settings at a specific time.
REQ3	Stopwatch mode which provides the stopwatch services.
REQ4	The stopwatch's counter resolution should be 200ms.
REQ5	The time resolution for the watch should be 500ms.
REQ6	The watch must be displayed in the format hh:mm AM/PM and updates every second.
REQ7	The stopwatch must be displayed in the format hh:mm:ss