

Homework 2:

Design a timer that gets two numbers (minute & second) as input from two different ports (such as port A for seconds and port B for minutes) and starts counting down till it gets to zero.(and show the time in an LCD in form of seconds and minutes left) and by becoming zero , an LED (red led) turns on as an alarm.

1 – by changing the input , the counter must start again from the new given inputs.

2 – we should be able to pause the counting (by pushing a switch or changing a the state of a logic state) and then continue the counting by pushing that switch again.

hint :

1 - we use interrupts for changing the state of the counters.

2- we can use Timer/Counter for counting.

3- Micro gets it's input by logic states or switches.

4 – We are able to the amount of the inputs as seconds or minutes in only 8 bits.

equipment to use :

Atmega32

LCD : LM016L

LED:LED-RED

Switches or LOGIC STATES

GATES (If needed)