Mini Proj 2 Requirements:

Implement the following Stopwatch system with the specifications listed below:

1. Use ATmega32 Microcontroller with frequency 1Mhz.
2. Configure Timer1 in ATmega32 with CTC mode to count the Stop Watch time.
3. Use six Common Anode 7-segments.
4. Connect the six 7-segments in the project using the multiplexed technique. You should use one 7447 decoder for all 7-segments and control the enable/disable for each 7-segement using a NPN BJT transistor connect to one of the MCU pins.
5. We can connect more than one 7-segment display by using the Multiplexing method. In this method, at a time one 7-segment display is driven by the Microcontroller and the rest are OFF. It keeps switching the displays using transistors. Due to the persistence of vision, it appears as a normal display.6. Connect 7447 decoder 4-pins to the first 4-pins in PORTC.
6. Use first 6-pins in PORTA as the enable/disable pins for the six 7-segments.
7. Stop Watch counting should start once the power is connected to the MCU.
8. Configure External Interrupt INT0 with falling edge. Connect a push button with the internal pull-up resistor. If a falling edge detected the Stop Watch time should be reset.
9. Configure External Interrupt INT1 with raising edge. Connect a push button with the external pull-down resistor. If a raising edge detected the Stop Watch time should be paused.

10. Configure External Interrupt INT2 with falling edge. Connect a push button with the internal pull-up resistor. If a falling edge detected the Stop Watch time should be resumed.
11. Check this video: https://youtu.be/emp-musYxII

Thanks and Good Luck

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