

The goal of this project is to design and implement a reaction time measurement system using the MSP430 microcontroller. The system will test a user's reflexes by timing how quickly they can respond to a visual stimulus (LEDs). This project demonstrates the use of hardware interrupts, timers, and serial communication, integrating both digital input/output and precise timing control.

**MSP430 Peripherals Used:**

Port I/O and Interrupts: Used to detect the user's button press and control the LED indicator.  
TimerA: Configured to measure the elapsed time between the LED signal and button press with high precision.  
RS-232 Communication (UAH Serial App): Sends the measured reaction time to a workstation for display and analysis.

**External Components Used:**

Switch (Pushbutton): User input for reaction response.  
LED: Provides the visual cue to indicate when to respond.