Timers

Agenda

1. Revision of the previous seminar
2. Basics of interrupts
3. Basics of timers
4. Implement simple timer for LED
5. Upgrade solution from previous seminar to use timers

Revision

- Copy and paste solution.c
- Check the code together

Interrupts

- Code that reacts to some event
- A main function is interrupted when the interrupt occurs
- After the interrupt finish, the main function continues
- They require some special function to be implemented - handler

Timers

- Idea: Registers that are being incremented (or decremented)
- Can cause interrupts
- Can be used to create a more precise delay function
- Component to slow down the incrementing of timer - prescaler

Assignment

1. Check datasheet
   and find registers for timer setup:
   - Interrupts
   - Timers
2. Implement simple timer interrupt that toggle our LED
3. Implement an upgraded PWM that use timer interrupts

Cheatsheet

- T0CON
- RCON: IPEN
- INTCON: GIE, PEIE,
- INTCON: TMR0IE, TMR0IF
- INTCON2: TMR0IP
- Header for bits: `#include <pic18f24k22.h>`


That's all Folks!