```
//*****************************************************************************
/// @file     main.c
/// @author   Jay Convertino (electrobs@gmail.com)
/// @brief    Military Time Clock program, a 24 hour clock.
/// @details  This program uses ifs for its time keeping. This is done to reduce
///           the time needed to execute and instruction. Divides and by
///           extension mod, need many instruction cycles to complete.
///           Ifs and compares are usually faster but not as clean. For such
///           a low resource micro-controller a bit more code space was preferred
///           vs longer execution time. In addition, the decision to to have so
///           much code in the ISRs is ill-advised. In this case with careful
///           testing this operates well and doesn't present a problem.
///
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//*****************************************************************************

/// @brief ATMEGA 89s51 specific header, has a 3rd timer.
#include <at89x51.h>
/// @brief standard int for uints
#include <stdint.h>

/// @def Timer 0 high reg for 12 MHz milliseconds count
#define TH0_START 0xFC
/// @def Timer 1 low reg for 12 MHz milliseconds count
#define TL0_START 0x18

/// @def Timer 1 high reg for 2 Hz clock divide by 2 for seconds.
#define TH1_START 0xFF
/// @def Timer 1 low reg for 2 Hz clock divide by 2 for seconds.
#define TL1_START 0xFE

/// @def ON is binary 1
#define ON  1
/// @def OFF is binary 0
#define OFF 0

/// @def binary position for one minutes segment transistor input.
#define SEG_ONE_MINUTE 1
/// @def binary position for ten minutes segment transistor input.
#define SEG_TEN_MINUTE 2
```