

intervalTimer.h

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/*
 * intervalTimer.h
 *
 * Created on: Sep 22, 2014
 * Author: coltmt
 */

#ifndef INTERVAL_TIMER_H_
#define INTERVAL_TIMER_H_
#include <stdint.h>
#include "xparameters.h"

uint32_t intervalTimer_start(uint32_t timerNumber);
/*
 * Starts the timer indicated by input parameter
 * Parameter: timerNumber
 * Returns: Boolean true if started
 *           Boolean false if failed to start
 */

uint32_t intervalTimer_stop(uint32_t timerNumber);
/*
 * Stops the timer indicated by input parameter
 * Parameter: timerNumber
 * Returns: Boolean true if stopped
 *           Boolean false if failed to stop
 */

uint32_t intervalTimer_reset(uint32_t timerNumber);
/*
 * Resets the timer indicated by input parameter
 * Parameter: timerNumber
 * Returns: Boolean true if reset
 *           Boolean false if failed to reset
 */

uint32_t intervalTimer_init(uint32_t timerNumber);
/*
 * Initializes the timer indicated by input parameter
 * Parameter: timerNumber
 * Returns: Boolean true if initialized
 *           Boolean false if failed to initialize
 */

uint32_t intervalTimer_initAll();
/*
 * Initializes all three timers
 * Returns: Boolean true if timers initialized
 *           Boolean false if failed to initialize
 */

uint32_t intervalTimer_resetAll();
/*
 * Resets all three timers
 * Returns: Boolean true if timers reset
 *           Boolean false if failed to reset
 */

uint32_t intervalTimer_testAll();
/*
 * Verifies operation of timers
 * Returns: Boolean true if timers passed test
 *           Boolean false if failed test
 * Comments: Test results printed in console
 */

uint32_t intervalTimer_runTest(uint32_t timerNumber);
/*
 * Verifies operation of timer indicated by input parameter
 * Parameter: timerNumber
 * Returns: Boolean true if timers passed test
 *           Boolean false if failed test
 */
```

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* Comments:  Test results printed in console
*/
uint32_t intervalTimer_getTotalDurationInSeconds(uint32_t timerNumber, double *seconds);
/*
* Reads the time on the timer registers
* Parameters: timerNumber
*             seconds
* Comments:   seconds passed in by reference and modified in function
*/

#endif
```