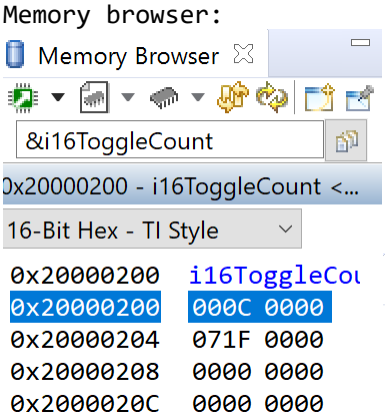
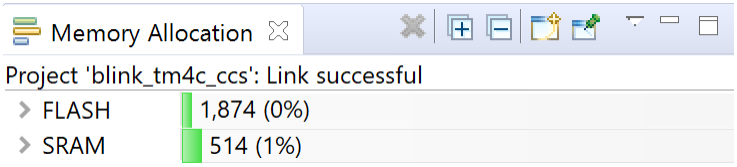
Tenniel Takenaka-Fuller
Github root directory: Please see webcampus submission for link.

Date Submitted: **11/23/19**

Task 01:

Memory browser:





Task 02:

Modified Code:

```
//---------------------------------------------------------------------------
// Project: Blink TM4C - CCS Lab - STARTER
//
// Author: Eric Wilbur
//
// Date: June 2014
//
//---------------------------------------------------------------------------


//-----------------------------------------
// TivaWare Header Files
//-----------------------------------------
#include <stdint.h>
#include <stdbool.h>

#include "inc/hw_types.h"
#include "inc/hw_memmap.h"
#include "driverlib/sysctl.h"
#include "driverlib/gpio.h"
#include "inc/hw_ints.h"
#include "driverlib/interrupt.h"
#include "driverlib/timer.h"
#include <time.h>


//-----------------------------------------
// Prototypes
//-----------------------------------------
```

Grading scheme: 30% Coding, 30% Documentation, 40% Execution/Video.

```
void hardware_init(void);
void ledToggle(void);
void delay(void);


//---------------------------------------
// Globals
//---------------------------------------
volatile int16_t i16ToggleCount = 0;


//---------------------------------------------------------------------------
// main()
//---------------------------------------------------------------------------
void main(void)
{

   hardware_init();                                          // init hardware via Xware

   while(1)                                                        // forever loop
   {
         ledToggle();                                  // toggle LED

         delay();                                                  // create a delay
of ~1/2sec

         i16ToggleCount += 1;                                // keep track of #toggles
   }

}


//---------------------------------------------------------------------------
// hardware_init()
//
// inits GPIO pins for toggling the LED
//---------------------------------------------------------------------------
void hardware_init(void)
{
      //Set CPU Clock to 40MHz. 400MHz PLL/2 = 200 DIV 5 = 40MHz
      SysCtlClockSet(SYSCTL_SYSDIV_5|SYSCTL_USE_PLL|SYSCTL_XTAL_16MHZ|SYSCTL_OSC_MAI
N);

      // ADD Tiva-C GPIO setup - enables port, sets pins 1-3 (RGB) pins for output
      SysCtlPeripheralEnable(SYSCTL_PERIPH_GPIOF);
      GPIOPinTypeGPIOOutput(GPIO_PORTF_BASE, GPIO_PIN_1|GPIO_PIN_2|GPIO_PIN_3);

      // Turn on the LED
      GPIOPinWrite(GPIO_PORTF_BASE, GPIO_PIN_1|GPIO_PIN_2|GPIO_PIN_3, 4);

}


//---------------------------------------------------------------------------
// ledToggle()
```

```
//
// toggles LED on Tiva-C LaunchPad
//-----------------------------------------------------------------------
void ledToggle(void)
{
	// LED values - 2=RED, 4=BLUE, 8=GREEN
	if(GPIOPinRead(GPIO_PORTF_BASE, GPIO_PIN_2))
	{
		GPIOPinWrite(GPIO_PORTF_BASE, GPIO_PIN_1|GPIO_PIN_2|GPIO_PIN_3, 0);
	}
	else
	{
		GPIOPinWrite(GPIO_PORTF_BASE, GPIO_PIN_2, 4);
	}
}



//-----------------------------------------------------------------------
// delay()
//
// Creates a 500ms delay via TivaWare fxn
//-----------------------------------------------------------------------
void delay(void)
{
	 SysCtlDelay(13400000);		// makes delay 2x as slow!

}
```

Grading scheme: 30% Coding, 30% Documentation, 40% Execution/Video.