**Date Submitted: 10/2/18**

**Task 00: Execute provided code**

Youtube Link: https://www.youtube.com/watch?v=4YG6ECiblkU

**#include** <stdint.h> // Variable definitions for C99 standard

**#include** <stdbool.h> // Boolean definitions for C99 standard

**#include** "inc/hw\_memmap.h" // Macros defining memory map

**#include** "inc/hw\_types.h" // Defines common types and macros

**#include** "driverlib/sysctl.h" // Macros defining System Control API

**#include** "driverlib/gpio.h" // Macros defining GPIO API

uint8\_t ui8PinData=2;

**int** **main**(**void**)

{

**SysCtlClockSet**(SYSCTL\_SYSDIV\_5|SYSCTL\_USE\_PLL|SYSCTL\_XTAL\_16MHZ|SYSCTL\_OSC\_MAIN);

**SysCtlPeripheralEnable**(SYSCTL\_PERIPH\_GPIOF);

**GPIOPinTypeGPIOOutput**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3);

**while**(1)

{

**GPIOPinWrite**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3, ui8PinData);

**SysCtlDelay**(2000000);

**GPIOPinWrite**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3, 0x00);

**SysCtlDelay**(2000000);

**if**(ui8PinData==8) {ui8PinData=2;} **else** {ui8PinData = ui8PinData\*2;}

}

**return** 0;

}

**------------------------------------------------------------------------------------**

**Task 01:**

Youtube Link: https://www.youtube.com/watch?v=6r2J4Cx1lhI

**#include** <stdint.h> // Variable definitions for C99 standard

**#include** <stdbool.h> // Boolean definitions for C99 standard

**#include** "inc/hw\_memmap.h" // Macros defining memory map

**#include** "inc/hw\_types.h" // Defines common types and macros

**#include** "driverlib/sysctl.h" // Macros defining System Control API

**#include** "driverlib/gpio.h" // Macros defining GPIO API

uint8\_t ui8PinData=2;

**int** **main**(**void**)

{

**SysCtlClockSet**(SYSCTL\_SYSDIV\_5|SYSCTL\_USE\_PLL|SYSCTL\_XTAL\_16MHZ|SYSCTL\_OSC\_MAIN);

**SysCtlPeripheralEnable**(SYSCTL\_PERIPH\_GPIOF);

**GPIOPinTypeGPIOOutput**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3);

**while**(1)

{

/\* Calculations

\* (seconds) / ( (1/CLK) \* 3) = Delay multiplier

\* (0.425s) / ( (1/40Mhz) \* 3) = 5,666,666s

\*/

**GPIOPinWrite**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3, ui8PinData);

**SysCtlDelay**(5666666);

**GPIOPinWrite**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3, 0x00);

**SysCtlDelay**(5666666);

**if**(ui8PinData==8) {ui8PinData=2;} **else** {ui8PinData = ui8PinData\*2;}

}

}

**------------------------------------------------------------------------------------**

**Task 02:**

Youtube Link: https://www.youtube.com/watch?v=fHS\_EwxOvVY

**#include** <stdint.h> // Variable definitions for C99 standard

**#include** <stdbool.h> // Boolean definitions for C99 standard

**#include** "inc/hw\_memmap.h" // Macros defining memory map

**#include** "inc/hw\_types.h" // Defines common types and macros

**#include** "driverlib/sysctl.h" // Macros defining System Control API

**#include** "driverlib/gpio.h" // Macros defining GPIO API

uint8\_t ui8PinData=2;

uint8\_t sequence[6] = {2, 8, 4, 10, 12, 14}; // Array: [R, G, B, RG, GB, RGB]

**int** **main**(**void**)

{

**int** i = 0;

**SysCtlClockSet**(SYSCTL\_SYSDIV\_5|SYSCTL\_USE\_PLL|SYSCTL\_XTAL\_16MHZ|SYSCTL\_OSC\_MAIN);

**SysCtlPeripheralEnable**(SYSCTL\_PERIPH\_GPIOF);

**GPIOPinTypeGPIOOutput**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3);

**while**(1)

{

**for**( i = 0; i < 6; i++){

ui8PinData = sequence[i];

**GPIOPinWrite**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3, ui8PinData);

**SysCtlDelay**(5666666);

**GPIOPinWrite**(GPIO\_PORTF\_BASE, GPIO\_PIN\_1|GPIO\_PIN\_2|GPIO\_PIN\_3, 0x00);

**SysCtlDelay**(5666666);

}

i = 0;

}

}

**------------------------------------------------------------------------------------**