CS 4910
Project: Blacktop
Stories
3/16/2020

Team:	Skyler Sheler	skyler.j.sheler@wmich.edu	(616) 438-3527
	Erron Johnson	erron.d.johnson@wmich.edu	(269) 547-8933
	Allin Kahrl	f.allin.kahrl@wmich.edu	(207) 522-4859
	Tyler Henniges	tyler.m.henniges@wmich.edu	(269) 330-4229
Client:	WMU Computer Club	colin.c.maccreery@wmich.edu	(269) 276-3106
Contact:	Colin MacCreery	colin.c.maccreery@wmich.edu	(269) 276-3106
Project Lead	Allin Kahrl	f.allin.kahrl@wmich.edu	(207) 522-4859

A daughter board for the MSP-EXO430G2/ET “Launchpad” development board will be developed for Colin MacCreery for use in Western Michigan University’s CS-2230 Computer Organization and Assembly Language course. WMU Computer Club will oversee the production of the board. The boards will be maintained and purchased by computer club and be used by students in CS-2230.

The actors associated with the project are as follows:

- WMU Computer Club - The client requesting and financing the production of the board. CClub will handle the ordering, sale, and distribution of boards to CS-2230. CClub will need to have all of the necessary information to maintain and offer support for the boards.
- Colin MacCreery - The representative of computer club handling all administrative actions over the project and the professor that will use the board in CS-2230
- CS-2230 Students - The customer that will be purchasing and using the boards in CS-2230

Story	Time to complete	Risk (1-10)	Actual time to complete	% Complete
The board must be completed during the Novel Covid-19 outbreak	5 weeks	7	TBD	75%
The circuit board must be usable by the average student in CS 2230	4 weeks	4	TBD	85%

The board is able to be purchased and maintained by computer club	12 weeks	2	TBD	90%
The necessary materials (Circuit diagrams and pinout information) to reproduce and manufacture the boards are provided to the client	12 weeks	2	TBD	80%
A student has the ability to install, cross compile, and flash new code to the board. The code must be able to execute and interact with the board while it is running.	4 weeks	3	8 weeks	100%
The installation of the board is set up so it is difficult to make mistakes while doing so and contains durable sockets to prevent damage to the board. Installation of the board will require that the daughter board is attached to the programming board via clearly defined sockets and the installation of the necessary libraries outlined by CS-2230's documentation.	4 weeks	6	4 weeks	100%
Board manufacturers have been selected for maintainability of the project and computer club is able to communicate with them.	12 weeks	2	12 weeks	100%
The board contains all of the necessary peripherals to teach CS 2230	4 weeks	2	4 weeks	100%

The peripherals display all necessary functionality required for use in CS 2230	4 weeks	2	TBD	90%
The onboard EEPROM is able to communicate with the main MSP chip via SPI	4 weeks	6	TBD	75%
The board operates with the most recent stable release of ubuntu 18.04 over the most stable versions of virtualbox, vmware, and on real hardware via mspdebug and mspgcc.	4 weeks	1	4 weeks	100%
Students will be able to access appropriate documentation (schematic, parts, vendors, data sheets, documentation on all device drivers, example programs for device drivers) in a PDF student pack. Also instructions for compiling and flashing the board, write ups on serial i/o, and examples of simple programs will be provided.	12 weeks	2	TBD	90%
As part of a second release the board will require a test jig used to ensure the functionality of ordered boards. It will be constructed to clip onto the daughter board and contain peripherals that determine whether or not each peripheral is functional	12 weeks	8	TBD	30%
As part of a second release the test jig mentioned above will output	12 weeks	8	TBD	30%

information to a terminal to aid in accessibility testing. The jig will provide feedback for students with hearing disabilities				