Justin Robert

Project Week 4

Unit Testing Codes:

- Platform Direction Tests:
- Test if platform doesn't move when force is applied and velocity is 0
- Test is platform maintains nonzero velocity when no force is applied
- Test if platform increases velocity when force is applied in the same direction of the velocity
- Test if platform decreases velocity when force is applied in the opposite direction of the velocity
- HM Tests:
- Test if HM screen is the same as the Platform Direction given
- Test LEDs turnon when HM crashes
- Test both functions of each LEDs. Left LED current force magnitude, Right LED showing MAX_FORCE
- Error HM Tests:
- Test to make sure CapSense works with new setup
- Test to make sure PushButtons work with new setup
- Test physics (later on)

All are now passing

Functional Testing [Added]:

(None are fully functional yet)

- When resetting see if the LED is blinking very slow
- Finger controls the platform acceleration with the touch slider, also releasing does not fully stop platform [LEFT CONTROL]
- Finger controls the platform acceleration with the touch slider, also releasing does not fully stop platform [RIGHT CONTROL]
- Make sure that the ball bounces off the platform correctly, including repeated bounces and how they change the ball
- Make sure Button 0 makes the peak of the parabola higher
- Slider matches the LED's pwm while it blinks and will collide with the ball
- Make sure when button 1 is pressed the ball bounces outside of the canyon
- Make sure when pressing the opposite direction of slider, the platform decelerates before accelerating otherway
- Make sure button1 resets everything and the ball goes back to the top of the screen
- Make sure you cannot press button 1 a lot of times. AKA make it do nothing after a lot of presses
- Game over screen activates when appropriate
- Make a cool game :)

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Project Stands:

This week I finished the code for all of the unit tests. I did 10 tests but I will probably do more later when the project becomes complicated and I have to work things out one thing at a time. I also started the Functional Tests which none of them are functional but I have the general idea of them down. I didn't need to add any risk registers to the graph. This week was pretty good for me not going to office hours. However I did work on the project a lot more this week than the others

Summary - I have completed 40% of my currently-scoped, estimated work time (24/ actually spent /60 hr total estimate) in 67% of the initially-estimated time. (40 estimated for the items I have completed, of 60 hr total estimate). For the work that has been completed, I took about .632x as much time as I estimated. I don't think I will change the scope with the information I gathered this week.

Productive week overall.

List of in-scope work items:

Completed works:

LED Control

Slider Control with LED PWM

Task Creations

- This Week

I did a lot of testing this week also revising previous items such as the task diagram

Fixed issues with my previous code to work for the project

I never really understood the task diagram and the cutting, but now I think I do so I improved it from the original

Tast Unit testing is done, well for the most part, about 90%, all tests now pass but more are probably needed.

Platform performs as it should

Physics equations are good to go

Integrating the tasks into the actual project was a lot simpler than I thought, maybe unit tests are actually helpful, rather than a waste of time.

Working on the functional tests on the weekend and next week

Busy but fun for the most part

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Risk Register:
(No Registers Added This Week)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**Item**	**P**	**I**	**Risk (P*I)**	**Recognized**	**Mitigated/ Resolved**	**ROAM**	**How**		Justin Robert			
2	Late office hours so I could not get to them			4	8-Mar-22	Resolved	R	Since I didn't have class afterwards, just come later					
3	Office hours were same time as this class lab			200	6-Mar-22	Mitigated	M	Decided to go to other class office hours but instead went to more office hours this week					
4	Slept during office hours			120	15-Mar-22	None	A	I fell asleep and that was my bad, got little sleep					
5	Test during lab			200	13-Mar-22	Mitigated	M	Went to office hours as long as lab was					
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