CUTTING POINTS

1) Struct needs to be correct at all times. If they are not updating correctly, graphics on screen will lag or not work entirely. (so between tasks and structs - check data is updating correctly with some form of unit test)
2) Collisions with objects - need to make sure collisions and the positions of objects are correct. This also ties in with making sure the structs are updating correctly, so there is some overlap. However, I also need to check that collisions with satchels and the wall end the game, collisions with the satchel and shield destroy the satchel, etc. This can be checked visually, in addition to having some type of unit test to make sure the numbers in my struct are updating correctly.
3) Satchel not firing off when current one is off screen - should be checking for whether or not a satchel is present. If there isn't one, fire another. Can be checked visually like the last one, in addition to checking a boolean or something I will implement as soon as the current satchel is no longer present.

Cutting point 1:

- Move slider for a certain amount of time, check if platform moves correct distance - not sure yet exactly how I am going to check this - Would probably pass
- Press shield button, see if shield instantly pops up (if enough energy) - Would pass

Cutting point 2:

- Move platform into canyon wall, check program acknowledges collision (when I get far enough, this can be replaced with a visual check that the game ends - I have reached this point in my code now and I can set a breakpoint to verify this happens) - Would pass
- Let satchel hit platform, check that program acknowledges collision (also game ends when I get that far) - Would fail

Cutting point 3:

- When there is no satchel on screen, can use debugger to see if program acknowledges this and is going to fire another the next time it enters the data monitor task - Would fail
- When a satchel is on the screen, can check the boolean or whatever I decide to use to make sure the program knows it is there (otherwise it will just start firing off a ton of them) - Would fail

- Shoot at wall, part of wall should break - Would fail
- Railgun should disable after shot until railgun shot is off screen - Would fail
- Shoot while moving, platform should keep moving - would fail
- Let railgun shot hit platform, should destroy platform - would fail
- Tap railgun button, and hold after, first shot should go slow and second shot should go faster - would fail
- When foundation has one "shot" left, left LED should start blinking - would fail
- Hold far left of slider, then middle left, far left should see right LED is brighter and middle left dimmer

- Accelerate slider continuously into either wall, should see “GAME OVER” when slider is going fast enough - would pass
- Hold railgun shot button, press shield button, shield should pop up - would fail
- Hold shield button, shield should only pop up for rising edge - would pass

WEEKLY SUMMARY

This week I did a lot of my graphics. I added the castle, foundation, canyon, and the railgun. I also implemented the shield button. I started implementing my railgun shot. However, I have some pretty severe bugs with it that break a lot of other parts of my code when I shoot the railgun. I hope to fix this next week.

SUMMARY EFFORT and ESTIMATE NUMBERS

I did approximately 9.5 hours worth of work this week. I am now at 16 hours of my expected total of 29.5, which comes out to about 54% of my expected total work. The main remaining parts I have to complete are the satchels, fix the railgun, and the LEDs.

IN SCOPE WORK ITEMS

I finished the button/slider task this week. I may tweak them slightly going forward, but the implementation is largely what I envisioned. It took approximately how long I expected it to. I made progress on many other tasks.

TASK	EXPECTED	ACTUAL	EXPECTED TOTAL	ACTUAL TOTAL	COMPLETE?
PROJECT PLANNING	3	2.5	3	2.5	Y
UNIT TEST PLAN	3	1	6	3.5	N
BUTTON FIFO/SLIDER RESPONSE	2	2	8	5.5	Y
IMPLEMENT PHYSICS	8	6	16	11.5	N
DATA MONITOR TASK	1.5	0.5	17.5	12	N
DISPLAY TASK (not actualy display)	2	1	19.5	13	N
DISPLAY W/ GRAPHICS	4	3	23.5	16	N
LED TASK and FUNCTIONALITY	3		26.5		N
FINE TUNING (better graphics, messing with different settings to polish final projec	3		29.5		N

RISK REGISTER

My risk register was not adjusted this week. I will add more to this next week.

RISK REGISTER	P	I	Risk	Recognized	Mitigated/Resolved	ROAM	How
Graphics updating too slowly	20	60	1200	3/24/23		R	Plan ahead to make sure tasks are prioritized well
Slider sampled too slowly	10	80	800	3/24/23		R	Plan ahead to make sure tasks are prioritized well
Incorrect task diagram	100	100	10000	3/24/23	Mitigated	M	Checked with professor or TA
Losing track of time	30	80	2400	3/24/23	Mitigated	M	Going to make notes of what I have to do, write down how much time I have left to finish
Task switching (Do I need monitor task?)	5	60	300	3/24/23		R	Note that you can probably get rid of monitor task if you notice task switching is slowing program down too much
Platform clipping through side boundary	10	80	800	4/7/23	Resolved	R	I believe I covered all edge cases