**Test Plan and results:**

Preliminary unit testing

1. Show that pb0 and pb1 inputs and tasks are working by reading in the push buttons and outputting the result to an LED
2. Show that the cap sensor task is working properly by reading in various cap values
3. See that the LCD screen works and that it shows preliminary visuals (basic pendulum line, center bar etc.)
4. Hardcode in a pattern and see that the LCD updates and that the pendulum looks at last semi good
5. Set theta to 0 or pi and see that LED1 turns on as this is an error
6. Move the position by using the cap sense and verify that the slider actually moves the position by outputting the value to the LCD screen

Acceptance testing

1. Observe a steady pendulum when no inputs are pressed
2. Push PB0 and see that the pendulum slows down (DONE)
3. Push PB1 and see that the pendulum speeds up (DONE)
4. Push PB0 repeatedly to try and get the pendulum to fail and fall to one side, causing LED1 to turn on

**Statement of where your project stands:**

My project is in the architecture planning and implementation stage. I have been focusing on hammering out the architecture and how different tasks are communicating with each other and the timing of everything.

As of now, we have done 15% of the total work for the project with 10% of the implementation. With the structure of the program thought out, the implementation will be a matter of putting ideas to paper and thinking through how to get this done.

**List of in-scope work items:**

1. Incomplete
   1. Implement button input tasks – 1 hr
   2. Implement cap slider task – 1 hr
   3. Implement a physics engine – 2 hrs
   4. Define unchanging physics – 1 hr
2. Complete
   1. Startuptasks
   2. Structure planning

**Update your risk register:**

**Summary:**

I am making good progress and expect to be done on time. The physics engine poses a problem and will be dealt with in full for next week. Overall, the project is going well and once more rigorous testing begins with the implementation of the physics engine, we will have a better idea for how much more work needs to be done to have a functional game.