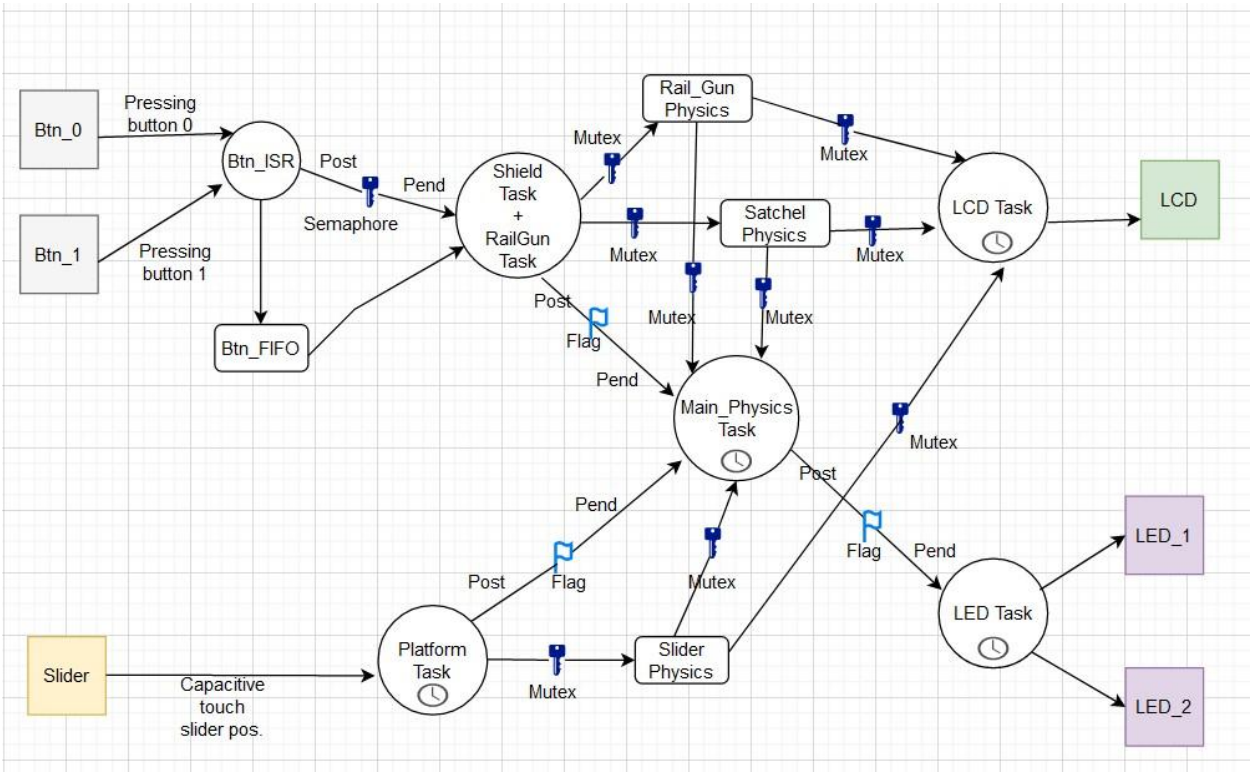
Task diagram :



Task Diagram with appropriate Data Flow and ITC/Mutex[*No changes from Week #1 so far*]

Describe at least 2 desirable "cutting points" for testing (see lecture topic 2.5) covering main paths and/or boundary condition handling :

The three cutting points that I have discovered so far would be :

1) The first cutting point, we could test the slider to move the platform left or to the right. This is to basically test the Platform Task. This is basically integrating the slider physics with the platform task.
2) The second cutting point could be to test the satchel physics and test out to see if we are getting the desired value or not. The physics of the satching getting destroyed, bouncing in the walls of the canyon and utilizing one of the the three methods listed in the Project writeup.
3) Third , Testing the LCD Task to display the initial images consisting of the double lines and singles lines on the right and left side of the display depicting the cliff and the canyon. There should be a platform at the bottom. We can easily test this by implementing and testing on the EFMPG12 and see if the necessary images appear on the screen. Later satchel position and rail gun shots have also to be displayed

Accurate summary statement of your functionality deliverables and usability so far :

Week 1 : This week I did the project planning, created my task diagram, and identified 2 cutting points and updated the risk registers.

Week 2 : This week I played with Will's Lab7 to learn more about working with the display task and to display a simple image on the screen. I implemented the button and slider task from previous labs to work on the project. I'm also making small progress on the display task, and some platform physics related work

Summary effort & estimate numbers :

This week I understood even more of the breadth and scope of the project required. I identified three cutting for which I need to perform unit and functional testing. I have also implemented the slider and the button setup to be utilized in the project. I have also started working on the overall data structure, the mutexes etc.

I would say that I made about 22.5% progress in the project. I have worked for about 12.5 hours(for week#2) and about 15.5-16 hrs total. And I estimate that I would need to work for about 61.5 hrs to implement the total project. I have made some decent progres in the current in scope items and would like to make some more progress on it soon

List of in-scope work items (NOT just _this_ week's), **indicating complete or not-yet-complete, along with your estimates of how long you think they will take in total for each :**

1) Initial Design for the Project + Task Diagram (3 hrs) : **Complete**
2) Implement Button ISR (5hrs) :**Complete**
3) Implement the Slider functionality (1 hr) : **Complete**
4) Implement LCD Task (7 hrs) : **Complete/Partial**
5) Implement LED Task (5 hrs) : **Not complete**
6) Implement Platform Task(6 hrs) : **Partial**
7) Implement Shield Task (8 hrs) : **Not complete**
8) Implement RailGun Task (5hrs) : **Not complete**
9) Implement Slider Physics (4 hrs) : **Not complete**
10) Implement Satchel Physics (5 hrs) : **Not complete - Gathering relevant equations+info(Complete)**
11) Implement Rail_Gun Physics(4 hrs) : **Not complete**

12) Implement + Integrate with the main Physics Task (9 hrs) : **Not complete**
13) Debugging + Testing (10 hrs) : **Not complete**
14) Extra Items (3 hrs) : **Not complete**

Completed Items Summary :

Implement button ISR : I finished this work in my in scope list as I felt that buttons functionality and setup is a major important one to finish before we can talk about the overall functionality of the various tasks and physics setup. This took about 1.5-2 hrs and was little easy as most was utilized from previous labs.

Implement Slider functionality : Again another important setup. Implementing the functionality and integrating with the capsense.c file . This will help me to develop the platform task along with the slider physics. This took me about 1 hour to complete and was again utilized mostly from previous labs.

Mutexes, Task setup etc : This kinda took a little bit of time as I implemented it from understanding the project in total and what's necessary for the essential functioning of the project. This took me about 4 hours to complete.

LCD Task : This in its initial stage seems complete but now I have to play around and implement the various shapes and lines to be displayed. I played mostly with Will's Lab7 for the display and understood how to work with the LCD for this task. This took me about 3.5-4 hours to complete.

Satchel/Slider Physics : (Not complete) : Even though I haven't started the implementation of the physics for both the slider and the satcher. I have started looking at the various information and information required to implement. I'm currently at the end stages of finalizing this necessary information. This took me about ~2 hours to plan and understand these items.