On or before 11/6/24, you must submit a schematic of at least the core functionality initially identified on 11/4/24 and a refined set of events with details on the responses. Modifications to the core functionality may take place up to this point. A KiCad schematic within a word document describing your core functionality should be uploaded to Gradescope. Only one team member needs to submit your checkpoint documentation.

The basic structure of the game involves a user trying to destroy asteroids. The game, at a minimum, will require the following core functionality:

1. The user should be able to input coins into the machine. The machine should count the number of coins inserted. If two coins have been inserted, the game should begin. **(Non-contact input)**
   a. Two LEDs will count the number of coins inserted
2. The user should be able to control the orientation of the "turret" by turning the potentiometer. (**AC INPUT**)
3. The "turret" will be controlled by a servo motor. The angle of the servo motor will be used to identify when a user has hit an asteroid (**Feedback 1**)
4. The user should fire the "turret" by pressing the fire button (**User input number 3)**
5. The game will buzz (via a haptic motor) if an asteroid has been hit (**Tactile user feedback**)
6. An LED will turn on to signal the fire button has been hit (**Feedback 3**)
7. An LED matrix will be used to both display the score and display the the timer

A preliminary state diagram has also been provided at the back of this document.