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ECE 3140

Project

Report:
The design was tested deployed to board, tested, and confirmed.

Bout1:
- The rotary encoder (on pins 6 and 7) move the paddle left and right bounded by the walls.
- A ball-block collision will destroy the block.
- Unbreakable walls exist on three sides (left, right and top).
- Ball collisions with these walls will results in a bounce, defined such that the departure angle is the same as the incidence angle.
- At the beginning of the set (activated by pressing key1), a ball is randomly injected left or right (with a 2/3rs statistical probability to the right, but the exact probability was not defined)
- If a ball exits the playing field from the bottom of the screen, a ball count on the left two 7 segments are decremented.
- When the ball count is at 0, and a ball exits the playing field, the game is over and the screen (excepting the paddle) is frozen.
- Key0 resets the game.
- The player's score is displayed on the 3 rightmost seven segments.

Bout1A:
- The game functions exactly as above, but using the inbuilt accelerometer as a controller.