EE 478 Final Project Proposal

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# Topic

For our final project we would like to recreate the classic arcade game Pong. In our implementation we will use the HDMI output to display two paddles on the sides of the screen which can be controlled by two players using the momentary push buttons. The players will use the pushbuttons to move the paddles up and down the screen to bounce a ball back and forth between them. If the ball hits one of the outside edges of the screen the game will reset.

# Potential Expansions

Should we complete implementation of the base game well before the due date, we may add one or more of the following additional features

* Score keeping – the number of times each player allows the ball to pass their paddle will be recorded and displayed on the screen or on the LEDs built into the Zybo board
* Game sounds – each time the ball bounces a sound off a paddle or edge of the screen a sound will be played
* Win Effects – when a player scores a point an animation will be displayed on the screen and a sound will be played
* Powerups – After a certain time of play certain powerups may be added to the game such as additional balls, larger or smaller paddles, or increased game speed