

## Two-Player Modifications

We now have the ability to get input from the “up” and “down” buttons, so naturally we want to incorporate two-player functionality. This will require a few steps:

- If your computer player code isn't in its own function already, create a separate function and copy the computer player's code into it. Call this function independently within the void loop. Verify your game still works properly.
- Create a second function that handles moving the second paddle that originally was controlled by the computer. This function should use the button input read in to move it.
- Comment out the function in the void loop that is dedicated for controlling the computer player and call the function you just wrote that uses the “up” and “down” buttons.
- Verify that your game is fully functional with two players controlling their respective paddles.

Now we have a working model of the game for two player mode. What we want to do now is incorporate the ability to play either single player or two-player mode. To do this, we must first modify our interface to create an options menu at the start of the game. The steps to accomplish this are as follows:

- In the setup loop, draw a blank screen and then draw two options, represented however you would like (for instance, single player mode may be represented by a single dash, and two-player mode can be represented as two dashes).
- Starting with the first option selected (which you can represent by drawing it a certain color), if the player clicks down on the analog stick, select the two-player mode (represent this by drawing the two player option a certain color and

redrawing the single-player option white). If the player is on the two player option and presses up on the analog stick, highlight that option.

- If the player presses the “down” button on either of these options, begin that specific version of the game.

A basic framework/pseudo code is available for this session to help create the two player options menu interface. Once you have this completed, your game is essentially finished. From here you have the freedom to modify the game further however you like. Try incorporating some more features such as increasing ball speed on impact, or creating a ‘start’ screen before the options menu.