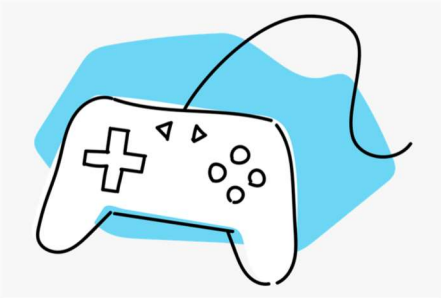
Final Assignment - You are making a game!

We will take our learned knowledge of our gameboards and programming of the Arduino to create a game. Use all available resources in the creation of this game, including those found on the class website as well as resources published on the internet.

Here are the requirements broken down by level.



To achieve a level 1

- At least **one button and one joystick direction** have a purpose.
- The primary focus of your game takes place **on the display**.
- There must be some **text**.
- There must be a **clear objective**.
- The game must not be similar to the pong example.

To achieve a level 2

- All components from level 1
- The display is drawing **at least two non-text shapes**:
  - Example: rectangles, circles, moving lines, etc.
- The on-board **LED** must be used.
- The **piezo** speaker must be used.

To achieve a level 3

- All components from level 2
- There must be **something directly controllable** on the screen.
  - Example, something movable: player, paddle, crosshair, etc.
- There must be a **score** visible
  - If not always visible, visible when applicable.

To achieve a level 4

- All components from level 3.
- There must be **something that happens with some timed interval**.
  - Example: ball speeding up, changing to the next level, etc.
- There must be a **way to win and to lose** the game.

Originality: All code submitted must be your own. You must be able to fully explain and understand all of the code you have submitted. Working collaboratively to discuss ideas and strategies is great – but actual code should never be shared. Code will be compared. All code found to be plagiarized (both the person sharing and the person copying) will be given a mark of zero.

Example Game Ideas:

Tic-tac-toe, Whack-a-mole, some kind of shoot-the-target game, a 'breakout' game, Hangman (where you click on the letter to guess), a simple side scroller, etc.

Assignment is due 10am Friday Jan. 29, 2021
Submitted to Mr. Emmell by email.