Pung

*Technical Process*

This IoT project was developed by Damien De Courcy & Fletcher van Ameringen for 159.236, Assignment 3.

The project built on prior assignments, with the inclusion of multiple new features such as:

* Task Delays
* Task Handling
* Socket Setup and Management (Client and Server)
* Board-to-board wireless communication

*Modes*

The application follows 2 modes (server or client):

* *Server* mode – the user initializes as an **access** **point**. Once a player joins, a new local ‘Pung game’ starts.
* *Client* mode – the user initializes as a **station** scans for local ‘Pung servers’ to join.

*Preliminary*

To play Pung, an SSID and server port must be selected on each board. The port must be identical on each board to establish a connection. As EspressIDF does not ‘free up’ used socket bindings (an issue with the framework), a new port must be selected after each game. This can be done through **Options**.

*Display*

Aside from during the initialization stages mentioned above, both boards display identical GUI.

The following button selections (from memory flash) will display the respective ‘pages’:

* **Play** 🡪
  + Host (create new local game)
  + **Join** 🡪
    - (Select an SSID from the list displayed to join a local game)
  + Exit (return to main menu)
* **Options** 🡪
  + Name (SSID selection)
  + Port (Port selection)
  + Colour scheme (change colour selection)
  + **Help** 🡪
    - Game Instructions
  + Save (save options and return to main menu)