ARDUBOY 

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Basic Setup

```
#include <Arduboy2.h>
Arduboy2 arduboy;

void setup() {
  arduboy.begin();
}

void loop() {
  if (!(arduboy.nextFrame())) return;

  arduboy.clear();
  arduboy.pollButtons();

  arduboy.display();
}
```

Include the **Arduboy2 library.**
Create an *instance* of the **Arduboy2 class** named arduboy

Initiate the arduboy *instance* by calling its begin() method

Early exit the loop function (return) while arduboy is not (!) **ready for the next frame**

Clear the screen to black

Poll the buttons - needed to track the state of buttons over time

Your game code will go here!

Draw the display buffer **onto** the **display**

Drawing to the Screen - *draw text and shapes (via the display buffer)*

```
arduboy.setCursor(42, 18); // Set the pixel position of where you want to print text (top left position)
arduboy.println("Hi"); // Prints "Hi" at the defined cursor position and sets the cursor to the next line.
arduboy.print("Yeah!"); // Prints "Yeah!" and does not change the cursor position.

arduboy.drawPixel(64, 32, WHITE); // Draws a pixel at position x:64/y:32
arduboy.drawLine(2, 2, 100, 2, WHITE); // Draws a line from x:2/y:2 to x:100/y:2

arduboy.fillCircle(20, 32, 10, WHITE); // Draws a filled white circle at position x:20/y:32, with a radius of 10px
arduboy.fillRect(10, 5, 20, 7, WHITE); // Draws a filled Rect at position x:10/y:5 (width: 20px, height: 7px)
arduboy.fillRoundRect(60, 5, 20, 7, 4, WHITE); // Same, but with rounded corners (corner radius 4px)

arduboy.fillScreen(BLACK); // Fill the entire screen with BLACK or WHITE
```

Input - *react to button presses*

```
arduboy.pollButtons();

if(arduboy.pressed(A_BUTTON)) {} // do something if the A button is pressed
if(arduboy.justPressed(B_BUTTON)) {} // do something if the B button was just pressed this frame
if(arduboy.justReleased(B_BUTTON)) {} // do something if the B button was just released this frame
if(arduboy.notPressed(UP_BUTTON)) {} // do something if the up button is NOT pressed
```

Poll the buttons - needed to track the state of buttons over time

LED - *make the little lightbulb shine (set the Red, Green and Blue values between 0 and 255)*

```
arduboy.setRGBled(127, 0, 0); // Set the RGB LED to RED at half brightness
arduboy.setRGBled(0, 0, 255); // Set the RGB LED to BLUE at full brightness
arduboy.setRGBled(0, 0, 0); // Set the RGB LED to off (Black)
```

Sound - *make it beep*

```
BeepPin1 beep; // class instance for speaker pin 1

beep.begin(); // set up the hardware for playing tones

beep.timer(); // handle tone duration - without this it will keep beeping forever
beep.tone(beep.freq(440), 5); // beep at 440Hz for 5 frames
```

In setup()

In loop()