https://goo.gl/cw56rD

420 Final notes - 1 page, front back of notes. Include snippets of code to utilize during practical

Can upload notes to github so we can copy/paste code

Part 1: choose between two options of components input/output

Part 2: programming with a screen OLED-- get pic of a screen, we need to replicate it with graphics and text

Don't forget necessary libraries

When in doubt, try and use example code & serial print to find where it went wrong Be sure to differentiate between local and global variables

Resistors: 330 (blue) [LEDs], 4.7k yellow purple red[temp sensor], 10k brown black orange [buttons]

[don't use pin 0 or 1 for digital, it is for cereal]

```
Neopixel (digital): setup: strip.begin(); // initialize the strip
```

strip.show(); // make sure it is visible strip.clear(); // Initialize all pixels to 'off' Initialize, .begin, .show color, .print

Loop: strip.setPixelColor(i, r, g, b); / i = neopix to be called, 0-#neopix, or can use i++ func for all

strip.show();

DON'T FORGET Serial.begin(9600); in void setup to be able to print serially

Temp sensor: digital input

```
analogWrite(5, 128); --- cites pin5, ~½ power (0-255)
```

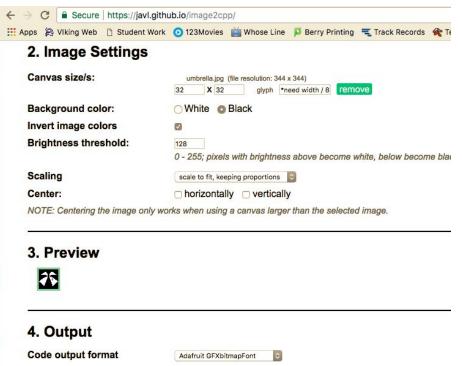
Circuitry

Photosensor (power -> ps -> analog, resistor & ground)

Flexsensor (power -> flexsen -> analog, resistor & ground)

For analog inputs, don't need to declare pinmode

```
OLED: void drawPixel(uint16_t x, uint16_t y, uint16_t color); //to draw 1 px Ex: display.drawPixel(5,5, WHITE); display.drawLine (x0,y0,x1,y1, color); display.drawFastVLine (x0, y0, length, color); display.drawFastHLine (x0, y0, length, color); display.drawCircle(64, 38, 20, WHITE); //format to draw object: x, y, r, color display.fillRoundRect ^can also fill circle display.drawRoundRect Display.drawFastHLine(x0, y0, x1, y1, x2, y2, color); display.setRotation(uint8 t rotation); (either 0-3 or 0, 90 etc
```



--width needs to be divisible by 8--

display.drawBitmap(0,0, umbrella, 32, 32, WHITE);

^32, 32 need to be inputs from image2CPP

