Activity:

LCD Hello World!

Description:

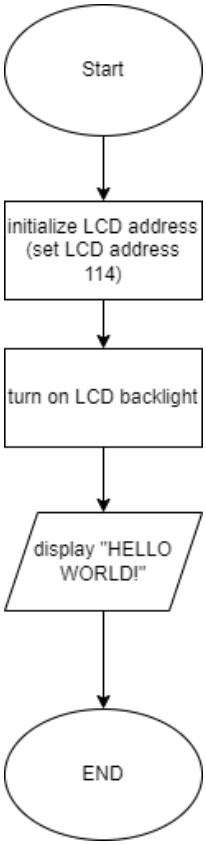
Build a program that will display hello world blinking onto the LCD screen.

Vocabulary and Concepts:

LCD (Liquid Crystal Display): A type of flat panel display that can let light go through it, or can block the light

Flowchart:

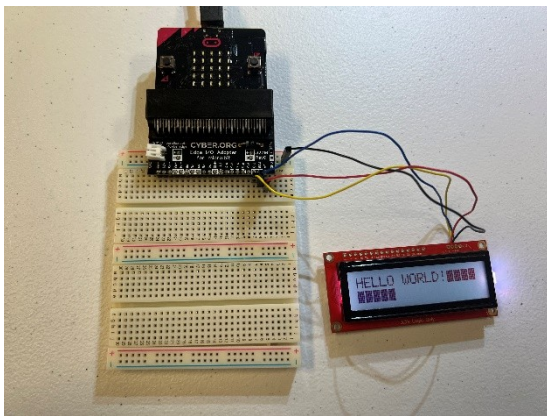
A flowchart is a way of representing the step-by-step process (algorithm) of your program. For this program, the flowchart is:



Build the Circuit

Materials Required:

- **RGB LCD Screen**
- **Micro:bit Breakout board (Edge I/O Adapter)**
- **Breadboard**
- **Flexible Qwiic cable**

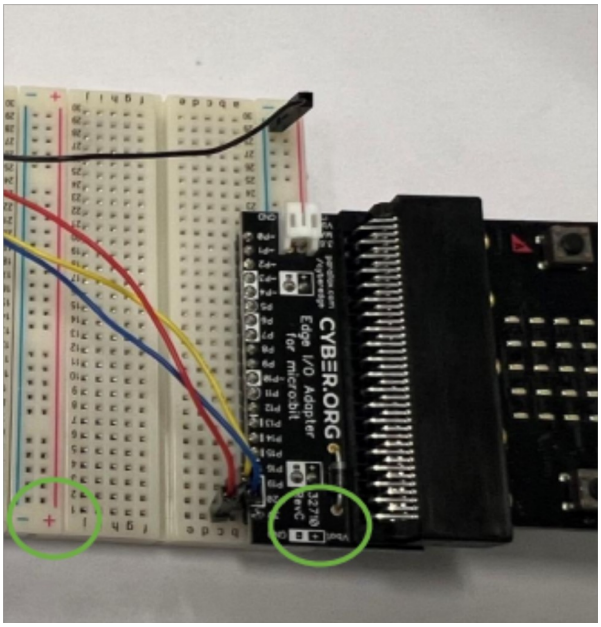


Hardware Hookup:

Contact from LCD	Connection to breakout	Connector (Qwiic Cable)
Connect qwiic cable in the back of LCD	OUT 3.3V (power)	Red wire
Connect qwiic cable in the back of LCD	GND (ground) _Blue negative column)	Black wire
Connect qwiic cable in the back of LCD	P20 (SDA)	Blue wire
Connect qwiic cable in the back of LCD	P19 (SCL)	Yellow wire

Instructions:

1) Place micro:bit into edge I/O adapter and connect Edge I/O adapter to breadboard with the positive and negative matching up.



Let’s Start Programming!

Step 1: Getting Started

First, search add the LCD extension. Next, grab on start block from basic tab and grab the needed blocks within the added LCD block from extension

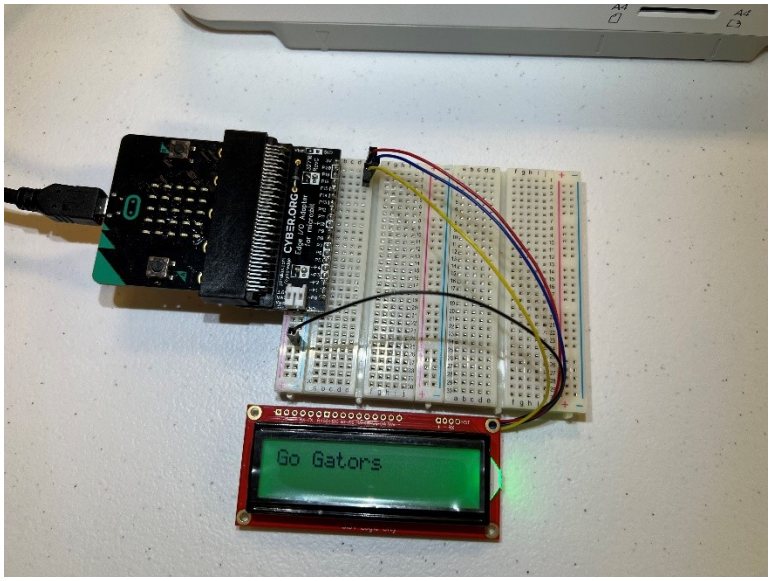
Extensions:

- LCD (type https://evergreen22.github.io/pxt-lcd-rgb-16x2-i2c/ in the extension search bar)

Step 2: Selection Changes

- Change LCD backlight block to the set LCD backlight red, green, blue. This allows to change the color of the screen.

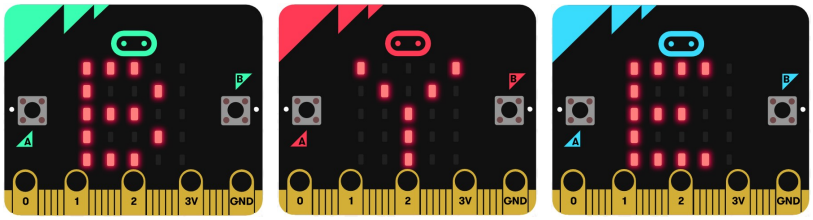
- Change the text in the show string block



Step 3: Download the Program
Step 4: Connect to your micro:bit
Step 5: Running the Program on the micro:bit

Congratulations!

You have created your LCD program!!



References
LCD Display tutorial: https://www.youtube.com/watch?v=oov5Q48V844
Flowchart tool: https://www.draw.io/