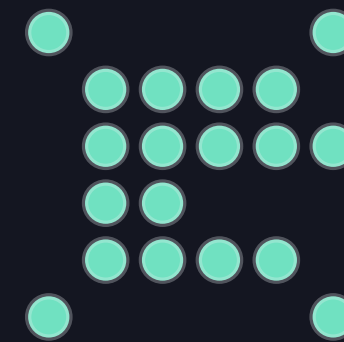
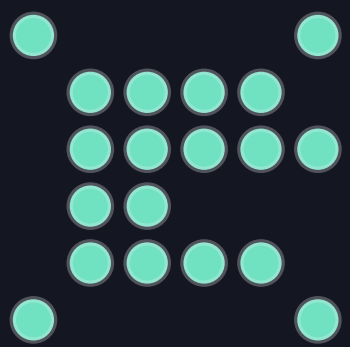




MicroPy Kids



CHALLENGE: UNDERSTANDING CODE

2

You will learn What Is Code · What Is a Development Environment

You will make Changes to your first program

You will need Pico W / Pico 2 W · Pico Unicorn Pack · MicroPy Kids

01 / CREATE

About 15 minutes

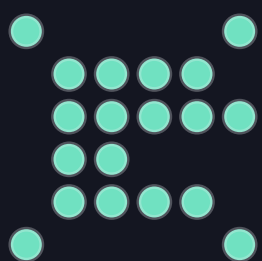
First steps

Using MicroPy Kids environment you will explore the first lines of code of your first MicroPython program.

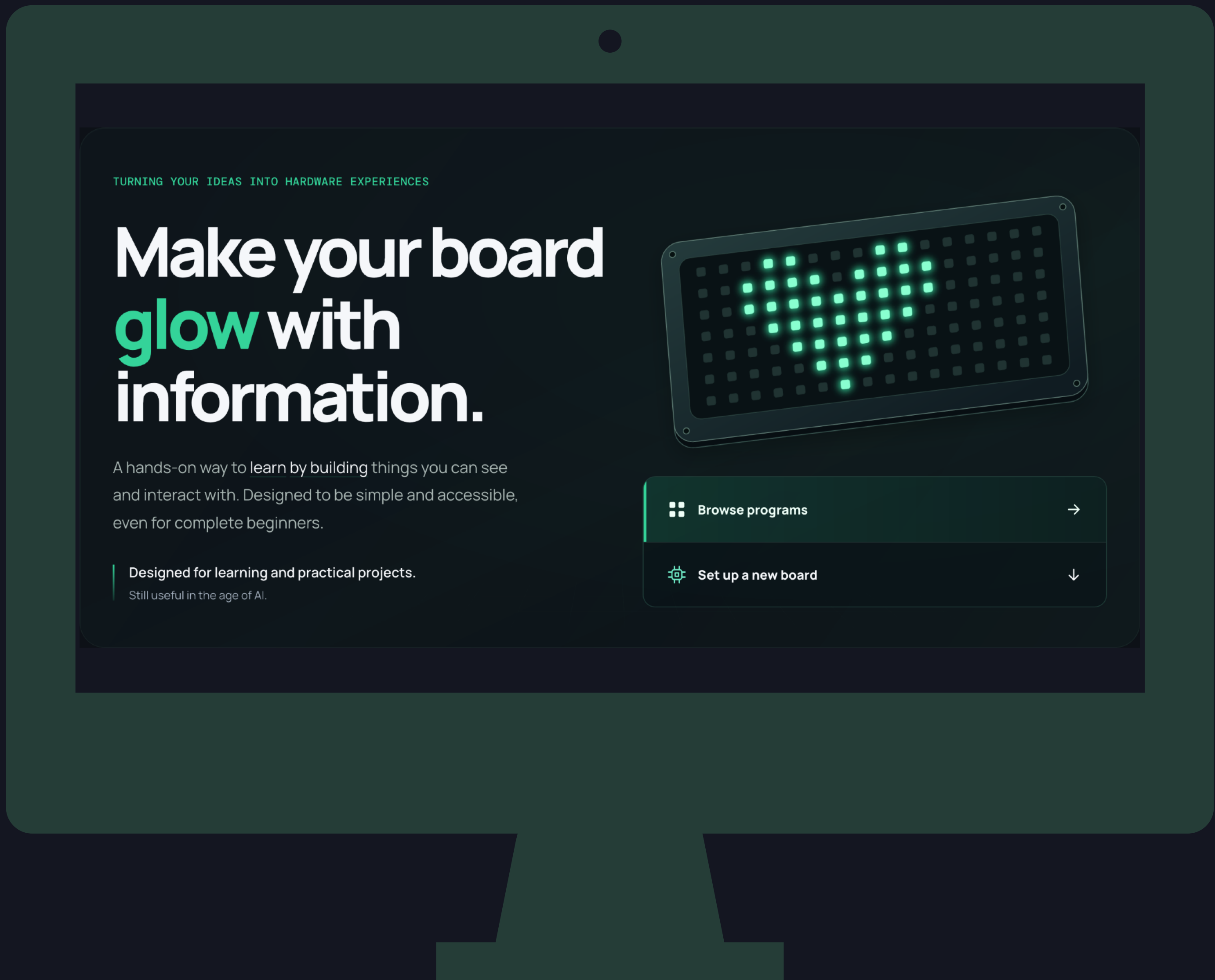
MicroPython is a programming language made to write programs that can run on our board.

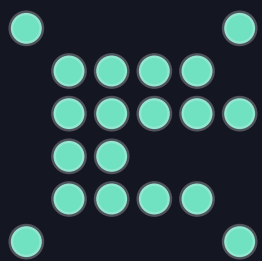
BlinkLED



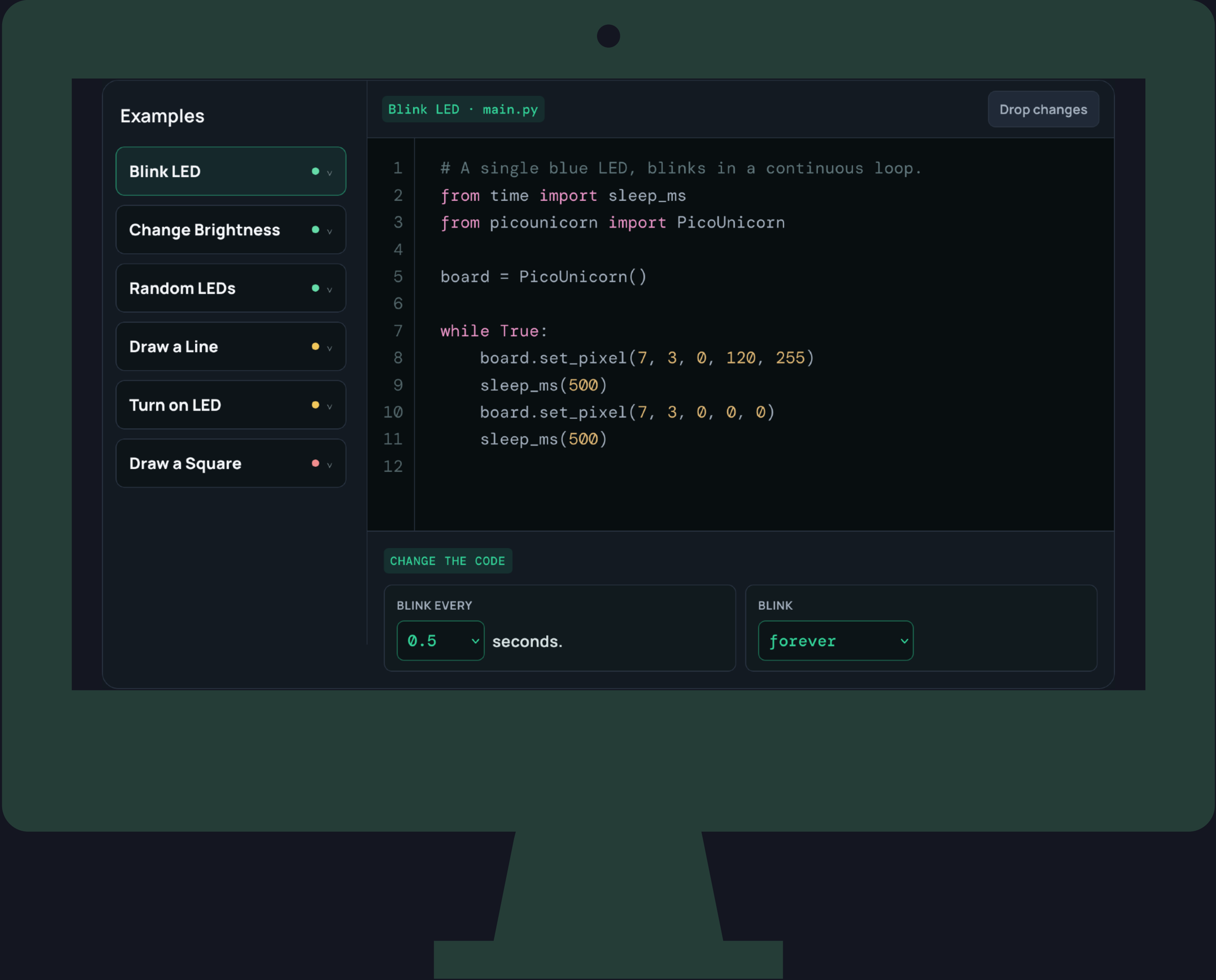


<https://glowgrid.nodes.ro>





Program Collection - MicroPy Kids



Open Program Collection

Navigate to the Program Library
using the top menu.

Open MicroPy Kids

Open the MicroPy Kids
program.

Select a program form the Examples section

Select BlinkLED

Change the code

Using the option bellow the
code change the code to see
the effects

Select Prepare Board

Send your program to the board
using Wi-Fi or a wired USB
connection.

See the result

See how your code changes
affect the program on the
board: remove the loop or
change the blink speed.

Send it to your board

Loading a program to the board </> Prepare Board

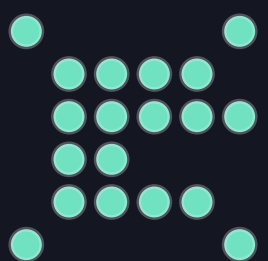
In BlinkLED, select Prepare Board button.

Confirm your hardware configuration.

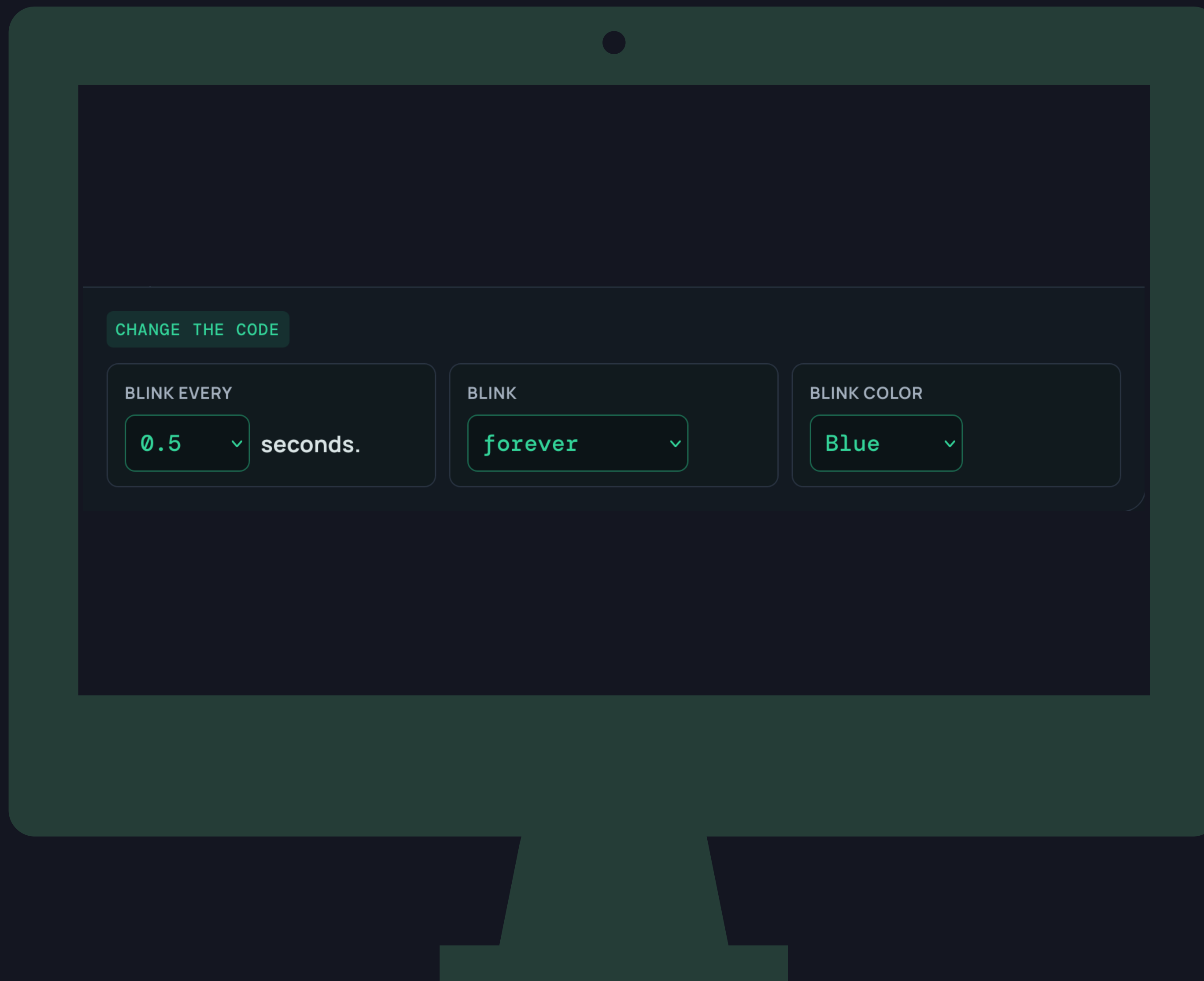
Choose Wi-Fi or USB cable and follow the connection instructions.

Send the program to your board and keep the board powered.

Wait until you see the confirmation that your program is running.



[Change the code](#)



Change the code

See what happens when you make small changes to your code

Select Blink every then download this new program to your board.

Blink every – learn about timing and delays

Choose how long the LED stays on and off. Learn how changing a delay makes the blinking faster or slower.

Select Blink then download this new program to your board.

Blink – learn about loops and repetition

Choose whether the LED blinks once, five times, or forever during your program.

Select Blink Color then download this new program to your board.

Blink Color – learn about RGB colors

Choose Red, Green, or Blue, then upload the updated program to your board.

What have you learned?

What is code

You've seen different lines of code in the MicroPy Kids editor and learned what each instruction does by hovering over it.

Code is a program that has a collection of clear instructions to be executed on your board.

What have you learned?

Starting with one instruction

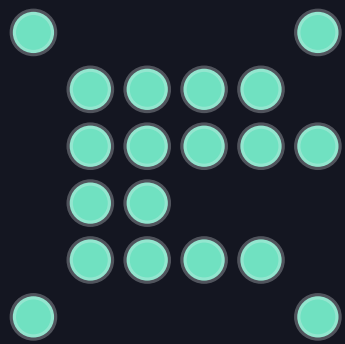
Find pixel at column 7, and row 3 and make it red.

```
board.set_pixel(7, 3, 255, 0, 0)
```

Or

Find pixel at column 7, and row 3 and make it blue.

```
board.set_pixel(7, 3, 0, 120, 255)
```



02 / EXPERIMENT AND IMPROVE

Change 7, change 3, change the color.

What have you learned?

Make things happen in order (in sequence)

The board follows your instructions from top to bottom.

```
board.set_pixel(7, 3, 0, 120, 255)  
sleep_ms(500)  
board.set_pixel(7, 3, 0, 0, 0)
```

What have you learned?

You can repeat things

Make programs run forever

`while True:`

```
board.set_pixel(7, 3, 0, 120, 255)
```

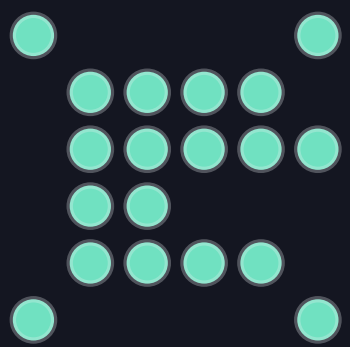
```
sleep_ms(500)
```

```
board.set_pixel(7, 3, 0, 0, 0)
```

What have you learned?

What is a development environment

A programing environment or also called
IDE - Integrated Development
Environment is an application from where
you can write, change and run your
programs.



CONGRATULATIONS

Let's talk

Need a hand with GlowGrid?

Drop us a line – we'd love to hear from you.

info@nodes.ro

