LED $_{A}nimationLibraryDocumentation$

Release 1.0

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Contents

Perform a variety of LED animation tasks

CHAPTER 1

Dependencies

This driver depends on:

- Adafruit CircuitPython

Please ensure all dependencies are available on the CircuitPython filesystem. This is easily achieved by downloading the Adafruit library and driver bundle.

CHAPTER 2

Installing from PyPI

On supported GNU/Linux systems like the Raspberry Pi, you can install the driver locally from PyPI. To install for current user:

```
pip3 install adafruit-circuitpython-led animation
```

To install system-wide (this may be required in some cases):

```
sudo pip3 install adafruit-circuitpython-led animation
```

To install in a virtual environment in your current project:

```
mkdir project-name && cd project-name
python3 -m venv .env
source .env/bin/activate
pip3 install adafruit-circuitpython-led animation
```

CHAPTER 3

Usage Example

```
import board
import neopixel
from adafruit_led_animation.animation import Blink
import adafruit_led_animation.color as color

# Works on Circuit Playground Express and Bluefruit.
# For other boards, change board.NEOPIXEL to match the pin to which the NeoPixels are␣
↪attached.
pixel_pin = board.NEOPIXEL
# Change to match the number of pixels you have attached to your board.
num_pixels = 10

pixels = neopixel.NeoPixel(pixel_pin, num_pixels)
blink = Blink(pixels, 0.5, color.PURPLE)

while True:
    blink.animate()
```

CHAPTER 4

Contributing

Contributions are welcome! Please read our Code of Conduct before contributing to help this project stay welcoming.

CHAPTER 5

Building locally

5.1 Zip release files

To build this library locally you'll need to install the circuitpython-build-tools package.

```
python3 -m venv .env
source .env/bin/activate
pip install circuitpython-build-tools
```

Once installed, make sure you are in the virtual environment:

```
source .env/bin/activate
```

Then run the build:

```
circuitpython-build-bundles --filename_prefix circuitpython-led_animation --library_
↪location .
```

5.2 Sphinx documentation

Sphinx is used to build the documentation based on rST files and comments in the code. First, install dependencies (feel free to reuse the virtual environment from above):

```
python3 -m venv .env
source .env/bin/activate
pip install Sphinx sphinx-rtd-theme
```

Now, once you have the virtual environment activated:

```
cd docs
sphinx-build -E -W -b html . _build/html
```

This will output the documentation to `docs/_build/html`. Open the index.html in your browser to view them. It will also (due to -W) error out on any warning like Travis will. This is a good way to locally verify it will pass.

CHAPTER 6

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6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/led_animation_simpletest.py

```
"""Blink LED animation."""
import board
import neopixel
from adafruit_led_animation.animation import Blink
import adafruit_led_animation.color as color

# Works on Circuit Playground Express and Bluefruit.
# For other boards, change board.NEOPIXEL to match the pin to which the NeoPixels are␣
↪attached.
pixel_pin = board.NEOPIXEL
# Change to match the number of pixels you have attached to your board.
num_pixels = 10

pixels = neopixel.NeoPixel(pixel_pin, num_pixels)
blink = Blink(pixels, 0.5, color.PURPLE)

while True:
    blink.animate()
```

6.2 API Reference

Used by autodoc_mock_imports.

CHAPTER 7

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