cedargrove_paletteslice

PaletteSlice is a CircuitPython wrapper class to add list slice and extended slice capability to a ***displayio.Palette*** object while preserving transparency. The class creates an adjusted ***displayio*** color palette object property (***PaletteSlice.palette***) and a reference color-transparency list property (***PaletteSlice.reference_list***).

Two versions of PaletteSlice are contained in the ***cedargrove_paletteslice*** package folder, ***paletteslice*** and ***paletteslice_acme***. The minimal version, ***paletteslice***, provides the slicing capability along with traditional ***displayio.Palette*** functions. The minimal version is designed to add palette slicing capability with reduced memory usage. An expanded version, ***paletteslice_acme***, adds typically-used list manipulation functions to the minimal set.

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Implementation Notes

Hardware:

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: https://circuitpython.org/downloads

class paletteslice.PaletteSlice(*source_palette*)

A wrapper class representing the CedarGrove PaletteSlice, a ***displayio.Palette*** slicing wrapper. Creates an adjusted ***displayio.Palette*** object property and a reference color-transparency list property.

> **Parameters:** **source_palette** – The ***displayio.Palette*** object. No default.

palette

The primary class palette (adjusted ***displayio.Palette*** object).

> **Parameters:** The adjusted ***displayio.Palette*** object.

reference_list

A list of color-transparency tuples derived from the primary class palette during instantiation

> **Parameters:** The color-transparency reference list that was created during instantiation.

is_transparent(*color*)

Returns ***True*** if the palette index is transparent. Returns ***False*** if opaque.

> **Parameters:** ***color*** — The palette color index to test.

make_transparent(*index*)

Set a palette index to transparency. Permanently modifies ***PaletteSlice.reference_list*** and ***PaletteSlice.palette***.

> **Parameters:** ***index*** — The palette color index to be made transparent.

make_opaque(*index*)

Set a palette index to opaque. Permanently modifies ***PaletteSlice.reference_list*** and ***PaletteSlice.palette***.

Parameters: ***index*** — The palette color index to be made opaque.

class paletteslice_acme.PaletteSlice(*source_palette*)

An expanded wrapper class representing the CedarGrove PaletteSlice, a ***displayio.Palette*** slicing wrapper. Creates an adjusted ***displayio.Palette*** object property and a reference color-transparency list property.

Parameters:
- **source_palette** – The ***displayio.Palette*** object. No default.

palette

The primary class palette (adjusted ***displayio.Palette*** object).

Parameters: The adjusted ***displayio.Palette*** object.

reference_list

A list of color-transparency tuples derived from the primary class palette during instantiation

Parameters: The color-transparency reference list that was created during instantiation.

is_transparent(*color*)

Returns ***True*** if the palette index is transparent. Returns ***False*** if opaque.

Parameters: ***color*** — The palette color index to test.

make_transparent(*index*)

Set a palette index to transparency. Permanently modifies ***PaletteSlice.reference_list*** and ***PaletteSlice.palette***.

Parameters: ***index*** — The palette color index to be made transparent.

make_opaque(*index*)

Set a palette index to opaque. Permanently modifies ***PaletteSlice.reference_list*** and ***PaletteSlice.palette***.

Parameters: ***index*** — The palette color index to be made opaque.

append(*color*)

Append a color value to the primary class palette. Permanently modifies ***PaletteSlice.reference_list*** and ***PaletteSlice.palette***.

Parameters:	***color*** — The color value to be added to the end of the primary class palette.

count(*color*)

Counts the occurrences of the color value in the ***PaletteSlice.reference_list***.

Parameters:	***color*** — The color value to count.

pop(*key*)

Remove a color from the primary class palette at slice object ***key***. Returns the removed color value. Permanently modifies ***PaletteSlice.reference_list*** and ***PaletteSlice.palette***.

Parameters:	***key*** — The target slice object to remove from the primary class palette.

index(*color, start=None, stop=None*)

Returns the smallest index where the color matches the element value or ***None*** if not found. ***start*** and ***stop*** optionally specify the starting and ending index for the search.

Parameters:	***color*** — The color value to count. ***start*** — The starting index value. Defaults to ***None*** (the start of the palette). ***stop*** — The ending index value. Defaults to None (the end of the palette).