Method Testing of Contrast-Finder a GitHub Open Source Project

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Contrast-Finder an Introduction

Contrast-Finder is an H/FOSS software originally designed by Matthieu Faure in 2006. Now it is an open source software on GitHub which is being maintained by the community. Contrast-Finders goal is to provide web developers with an easy to use software that allows them to quickly check if the foreground and background colors of a website have proper contrast. The software is also designed to give other color options to web developers to maintain a healthy color ratio.

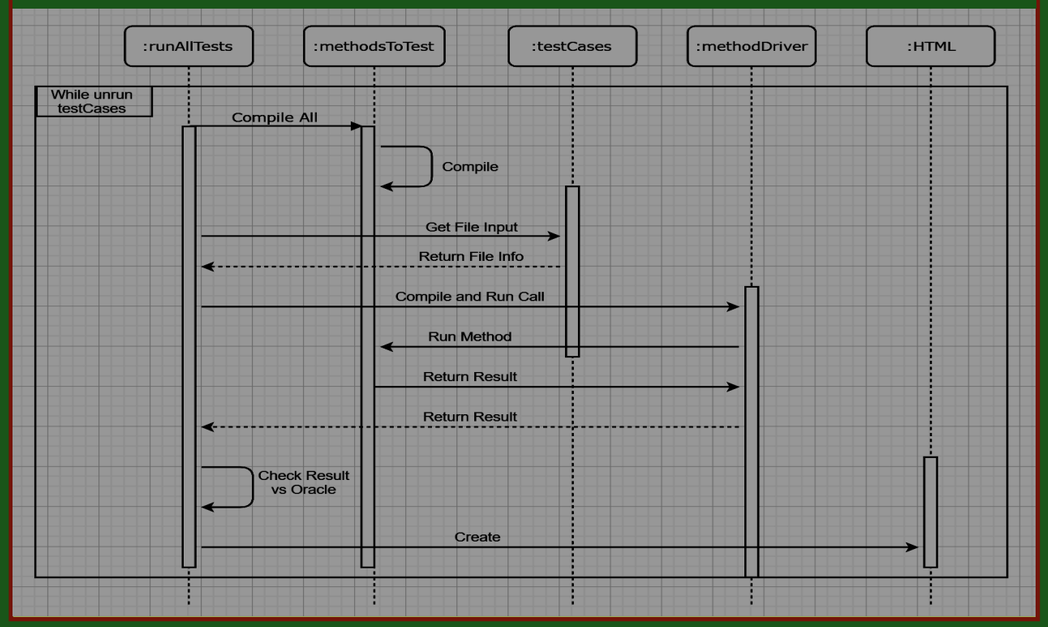
Project Goal

The project our group was tasked with was creating software that was capable of testing methods from a list of open source software in the command line. To do this we created separate drivers for each method. These Drivers send an input to the method being tested, receives the output of the tested method, and finally sends the output back to our runallscrips code for checking against the expected output. Lastly our code then took all the information received and consolidated it into an table for easier viewing.

Methods Tested

1. getColorNameFromStr(String colorStr) - Takes a color name and standardizes the name to lower case with the first letter capitalized.
2. hex2rgb(String colorStr) - Converts a Hex String into Rgb form then converts it into a Color obj.
3. distanceColor(Color fgColor, Color bgColor) - Takes two colors and returns the distance between their Rgb values
4. colorFromRgbStr(String colorStr) - Takes a String containing a Rgb and creates a java color obj.
5. rgb2Hsl(Color color) - Takes a Java color obj and converts to HSL(Hue, Saturation, Lighting)

Contrast-Finder Software Architecture



Team GoFish

Our Testing Results

Run Time: 11-19-2019 | 09:57:00

Test Case ID	Requirements	Driver	Component	Method	Inputs	Expected	Actual	Test Passed?
01	Takes a string that is a color name and checks to see if the color is a valid entry	xGetColorNameFromStrDriver	ColorNameLookup	getColorNameFromStr(String colorStr)	YELLOW	Yellow	yellow	Fail
02	Takes a string that is a color name and checks to see if the collor is a valid entry	xGetColorNameFromStrDriver	ColorNameLookup	getColorNameFromStr(String colorStr)	4			Pass
03	Takes a string that is a color name and checks to see if the collor is a valid entry	xGetColorNameFromStrDriver	ColorNameLookup	getColorNameFromStr(String colorStr)	green	Green	Green	Pass
04	Takes a string that is a color name and checks to see if the collor is a valid entry	xGetColorNameFromStrDriver	ColorNameLookup	getColorNameFromStr(String colorStr)	orAnge	Orange	Orange	Pass
05	Takes a string that is a color name and checks to see if the collor is a valid entry	xGetColorNameFromStrDriver	ColorNameLookup	getColorNameFromStr(String colorStr)	Shmoop			Pass
06	Takes a string that is a color hexidecimal code and returns the RGB value of that color (Green)	xHex2RgbDriver	ColorConverter	hex2RGB(String colorStr)	#00AA00	0,170,0	0,170,0	Pass
07	Takes a string that is a color hexidecimal code and returns the RGB value of that color (Blue)	xHex2RgbDriver	ColorConverter	hex2RGB(String colorStr)	#0000AA	0,0,170	0,0,170	Pass
08	Takes a string that is a color hexidecimal code and returns the RGB value of that color (Blue)	xHex2RgbDriver	ColorConverter	hex2RGB(String colorStr)	#121212	18,18,18	18,18,18	Pass
09	Takes a string that is a color hexidecimal code and returns the RGB value of that color (Blue)	xHex2RgbDriver	ColorConverter	hex2RGB(String colorStr)	#9915AB	153,21,171	153,21,171	Pass
10	Takes a string that is a color hexidecimal code and returns the RGB value of that color (Blue)	xHex2RgbDriver	ColorConverter	hex2RGB(String colorStr)	#00000G	ERROR	ERROR	Pass
11	Takes two Colors and determines the distance between their RGB values	xDistanceColorDriver	ContrastChecker	distanceColor(Color fgColor, Color bgColor)	255,255,0 255,165,0	90	853.8	Fail
12	Takes two Colors and determines the distance between their RGB values	xDistanceColorDriver	ContrastChecker	distanceColor(Color fgColor, Color bgColor)	255,255,0 -1,165,0	ERROR	ERROR	Pass
13	Takes two Colors and determines the distance between their RGB values	xDistanceColorDriver	ContrastChecker	distanceColor(Color fgColor, Color bgColor)	255,255,0 300,7,21	ERROR	ERROR	Pass
14	Takes two Colors and determines the distance between their RGB values	xDistanceColorDriver	ContrastChecker	distanceColor(Color fgColor, Color bgColor)	255,255,0 70,30,40	294	3380.3	Fail
15	Takes two Colors and determines the distance between their RGB values	xDistanceColorDriver	ContrastChecker	distanceColor(Color fgColor, Color bgColor)	255,255,0 60,130,0	231.6	1411.1	Fail
16	Takes an Rgb String (rgb(255, 255, 255) or 255, 255, 255) and converts it to a java Color obj	colorFromRgbStrDriver	ColorConverter	colorFromRgbStr(String colorStr)	rgb(255, 255, 255)	255,255,255	255,255,255	Pass
17	Takes an Rgb String (rgb(255, 255, 255) or 255, 255, 255) and converts it to a java Color obj	colorFromRgbStrDriver	ColorConverter	colorFromRgbStr(String colorStr)	rgb(0, 0, 255)	0,0,255	0,0,255	Pass
18	Takes an Rgb String (rgb(255, 255, 255) or 255, 255, 255) and converts it to a java Color obj	colorFromRgbStrDriver	ColorConverter	colorFromRgbStr(String colorStr)	255, 0, 0	255,0,0	255,0,0	Pass
19	Takes an Rgb String (rgb(255, 255, 255) or 255, 255, 255) and converts it to a java Color obj	colorFromRgbStrDriver	ColorConverter	colorFromRgbStr(String colorStr)	rgb(-255, 0, 0)	ERROR	ERROR	Pass
20	Takes an Rgb String (rgb(255, 255, 255) or 255, 255, 255) and converts it to a java Color obj	colorFromRgbStrDriver	ColorConverter	colorFromRgbStr(String colorStr)	#FFFFFF	ERROR	ERROR	Pass
21	Takes a color in rgb format and converts it to hsl format	xRgb2HslDriver	ColorConverter	rgb2Hsl(Color color)	160,180,0	hsl(66, 100%, 35%)	hsl(33, 100%, 35%)	Fail
22	Takes a color in rgb format and converts it to hsl format	xRgb2HslDriver	ColorConverter	rgb2Hsl(Color color)	80,0,0	hsl(0, 100%, 15%)	hsl(0, 100%, 15%)	Pass
23	Takes a color in rgb format and converts it to hsl format	xRgb2HslDriver	ColorConverter	rgb2Hsl(Color color)	-1,180,0	ERROR	ERROR	Pass
24	Takes a color in rgb format and converts it to hsl format	xRgb2HslDriver	ColorConverter	rgb2Hsl(Color color)	160,300,0	ERROR	ERROR	Pass
25	Takes a color in rgb format and converts it to hsl format	xRgb2HslDriver	ColorConverter	rgb2Hsl(Color color)	40,25,220	hsl(244, 79%, 48%)	hsl(122, 79%, 48%)	Fail