BLG458E

Functional Programming

Project

Emin Mastizada
150120914

The main application is “main.hs”.
Compile the project using:
$ ghc main.hs rgbhsv.hs namergb.hs hsvgradient.hs hsvdescribe.hs -dynamic
Execute the file: *./main*

Each point from the homework has own file:
1. **rgbhsv.hs** – For points 1 and 2 (rgb2hsv and hsv2rgb). In this program a simple formula from [1] and [2] is used.
2. **namergb.hs** – For point 3 (name2rgb). In this program, a Map is used with names and correcponding RGB value. It matches the name from the list and gives the corresponding value. The list if provided at [3]
3. **hsvgradient.hs** – For point 4 (hsvgradient). This one calculates delta values between start and end values divided by the step. The recursive function calculates next value and appends to the list. Modulo is used to limit values (s and v between 0 and 100, h between 0 and 360).
4. **hsvdescribe.hs** – For point 5 (hsvdescribe). This one uses the list from the [4] to make a description for a HSV value.

[1] https://www.rapidtables.com/convert/color/rgb-to-hsv.html
[2] https://www.rapidtables.com/convert/color/hsv-to-rgb.html
[3] https://www.w3schools.com/colors/colors_names.asp
[4] https://github.com/vasilisvg/human-colours/blob/master/py/en_gb.py