# EyeCare

Project for Python Classes on Jagiellonian University

Wojciech Nowak

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# 1. Overview

EyeCare is a program which takes care of your eyes.

EyeBreaker module will take care of your eyes' physical condition by performing notification every MINUTES. By this notification try to look around you and find green things to give your eyesight a rest. If you want to change Period time please turn off module first.
EyeCustomiser module will take care of your eyes after sunset. EyeCustomiser downloads sunrise and sunset time to set your screen colors temperature appriopriate to the current time. You can also set display color temperature manually basing on current light conditions. The value should be placed into entry box and approved by pressing "Return" key or by pressing "Set" button. The range of values is <1000,10000> Kelvin. Default system value is 6500K.The higher value the coolest color temperature.

Troubleshooting: type 'crontab -l' in terminal to show current Cron jobs
It should looks like this:
EyeBreaker enabled:
*/55 * * * * PATH/Wojciech_Nowak_PROJEKT/eyeBreaker.sh

EyeCustomiser enabled:
15 17 * * * PATH/Wojciech_Nowak_PROJEKT/eyeCustomiser.sh 4500
33 06 * * * PATH/Wojciech_Nowak_PROJEKT/eyeCustomiser.sh 6500

You can use it both with CLI and GUI interfaces.

EyeCare program works only in Linux environment.

EyeCare has been built basing on Python, Bash and C.

# 2. Main Class EyeCare.py

Usage: EyeCare.py [-h] [-f] [-g] [-b [MINUTES]] [-c] [-q]

This is EyeCare, program which takes care of your Eyes.

optional arguments:
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  -h, --help            show this help message and exit
  -f, --fast            Use default options for all arguments and turn on all
                        functionalities. This option is major.
  -g, --gui             Run EyeCare with Graphical User Interface. This option
                        is major except --fast and --disable options
  -b [MINUTES], --eyebreaker [MINUTES]
                        Turn on EyeBreaker module. EyeBreaker module will take
                        care of your eyes' physical condition by performing
```

notification every MINUTES. By this notification try
to look around you and find green things to give your
eyesight a rest.
-c, --eyecustomiser Turn on EyeCustomiser module. EyeCustomiser module
will take care of your eyes after sunset.
EyeCustomiser downloads sunrise and sunset time to set
your screen colors temperature appriopriate to the
current time.
-q, --disable Disable EyeCare on your computer. This option is major
except --fast option.

@libraries: it is necessary for GUI purposes to get python-tk package

## 3. EyeCareGUI.py

This class creates GUI for EyeCare program. It uses Tkinter library which is part of python-th library.

## 4. SunParameters.py

Class SunParameters has two methods:
String: getSunrise() returns today's sunrise time in Cracow,
String: getSunset() returns today's sunset time in Cracow.

Requirements:
It is neccessary to have Internet connection to make this script runs correctly.
In case of no Internet connection default value will be returned (sunrise = 7:00, sunset = 17:00).

@NOTE: This script is part of EyeCare program.

## 5. EyeCustomiser.sh

usage: eyeCustomiser.sh [-h] [-i] [-c] [TEMP]

This script customise display's colors temperature according to time.

positional arguments:
TEMP value of the color temperature [1000-10000], not applicable in initial mode

optional arguments:
-h, --help show this help message and exit
-i, --initial run script in initial mode, add crontab jobs

-c, --calc calculate current color temperature
-q, --disable disable EyeCustomiser

@libraries: it is recommended, but not necessary to get redshift program

@NOTE: This script is part of EyeCare program.

## 6. EyeBreaker.sh

usage: eyeBreaker.sh [-h][-q][-i PERIOD]

This script performs notification for every PERIOD minutes of work.

positional arguments:
PERIOD time between notifications

optional arguments:
-h, --help show this help message and exit
-i, --initial run script in initial mode, add crontab jobs
-q, --disable disable EyeBreaker
@libraries: it is recommended, but not necessary to get redshift program

@NOTE: This script is part of EyeCare program.

## 7. ScanDiscplay.sh

usage: scanDisplay.sh [-h]

This script returns all connected display devices.

optional arguments:
-h, --help show this help message
Dependencies and exit

@NOTE: This script is part of EyeCare program.

## 8. Dependencies

To enjoy all the features you will need:

- Internet connection
- python-tk package installed
- redshift program installed ( optional and not necessary