

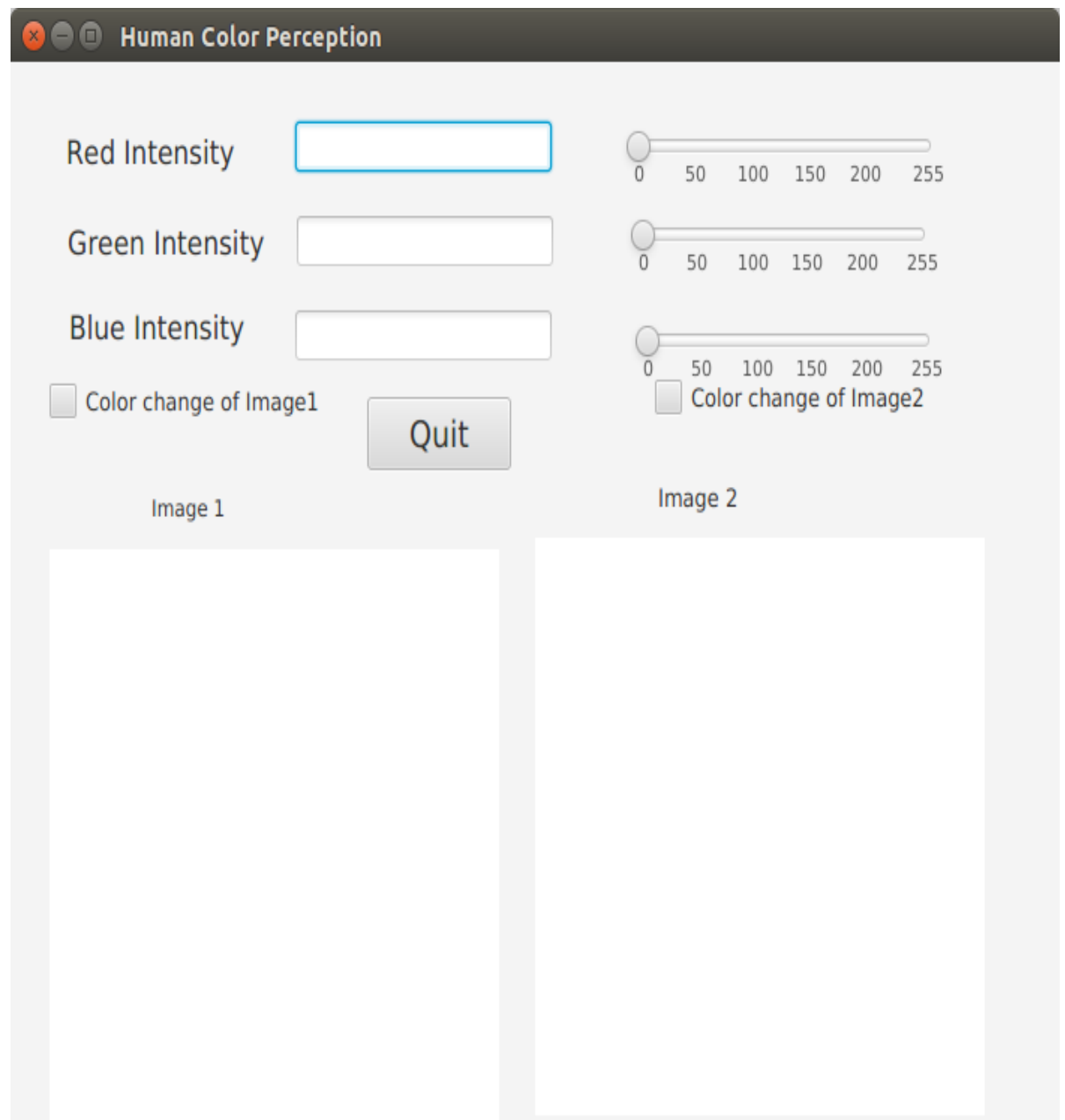
Advance Software Technology
Human Color Perception

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24-10-2016

0.1 Exercise 9

0.1.1 Graphical User Interface



0.1.2 Implementation Plan

- Initially, set the design of application by placing the buttons, text fields, slides and check boxes.
- Application uses labels of red intensity, green intensity and blue intensity to indicate the intensities of respective colors.
- Sliders for each colors are used to modify the value from 0 to 255.
- Text fields are used to listen the slider values and display the value of each slider.
- User can also change the color of images by putting desired value in text field.
- check boxes are used to select the image, each check box is used for each image.
- Labels of 300*300 are used to display the colors and colors are changed correspondingly with the values of sliders.
- Quit button is used to close the application.

0.1.3 User Documentation

- Firstly, user should check the check box for each image. There are two check boxes for each image, one can select the image for color change with the help of check boxes.
- Set the desired values with the help of sliders and observe the changes in the images.
- Values of sliders can also be observed on text fields for each slider.
- Color of images can be changed with desired values in text fields.
- Quit button is reset the colors of images to default i.e. White.
- Initially, white color is set on images by default.

0.1.4 Summary

Following observations are concluded by this experiment :

- When `rgb[127,127,127]` is set, both the images observe the gray colour.
- Whenever any slider value is increased or decreased color is also changed according to combination of all rgb colors.
- When value of all the colors is `[255,255,255]` then combination of all colors i.e. white is observed on both images.
- Norms of some random combination is calculated as :
 - Norm for `rgb[127,127,127]` is 183.164741067
 - Norm for `rgb[255,255,255]` is 367.771467824
 - Norm for `rgb[150,150,150]` is 216.336272338
 - Norm for `rgb[255,0,0]` is 254.9985869817109
 - Norm for `rgb[0,255,0]` is 254.9985869817109
 - Norm for `rgb[0,0,0]` is 0.0
 - Norm for `rgb[0,255,255]` is 321.2780132007147
- Whenever value of one slider/channel is changed so only changes are observed according to values of that slider as other sliders are by default set to 0.