

Computing for Graphics

Programming Project User Manual

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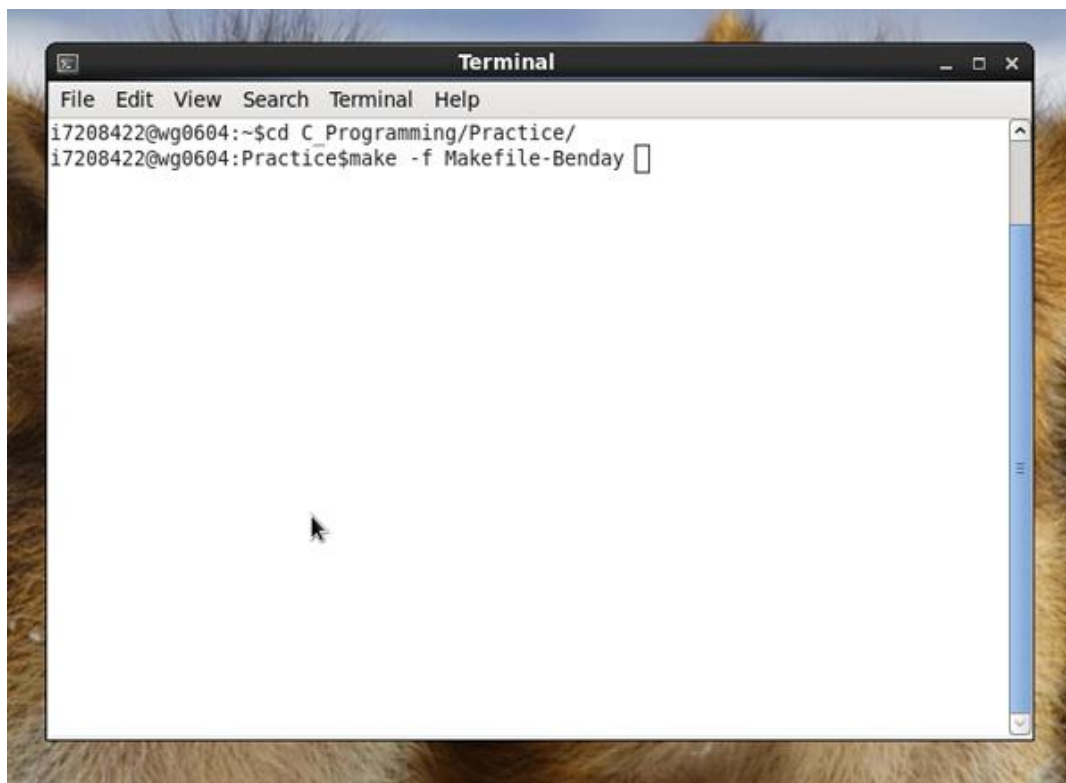
Project Option 4: Generation of Roy-Lichtenstein-like images from Photographs

Step01

In the terminal, go to the right directory which contains the C code, Makefile and all your images and Benday dot template.

Step02

Run the code in the terminal, make -f Makefile-Benday

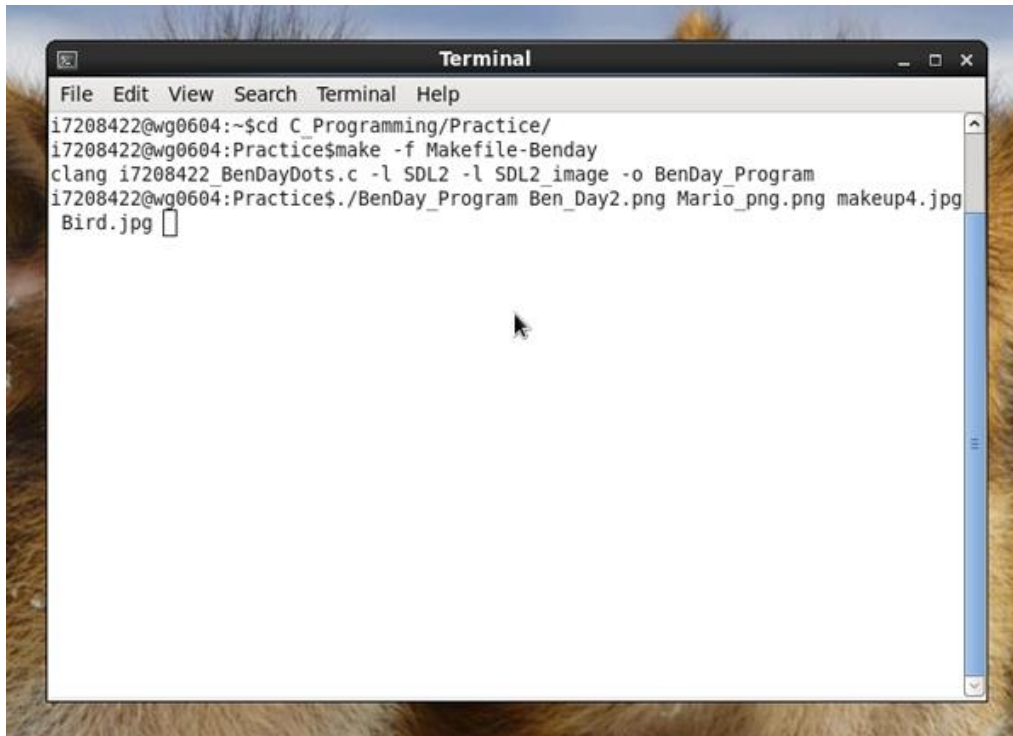


Step03

In the terminal, type

`./BenDay_Program <BenDay template> <Pictures to be inserted>`

You can type more than one image as shown below. Separate each picture with a space.

A screenshot of a macOS Terminal window titled "Terminal". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal text shows the following sequence of commands and output:

```
i7208422@wg0604:~$cd C_Programming/Practice/  
i7208422@wg0604:Practice$make -f Makefile-Benday  
clang i7208422_BenDayDots.c -l SDL2 -l SDL2_image -o BenDay_Program  
i7208422@wg0604:Practice$./BenDay_Program Ben_Day2.png Mario_png.png makeup4.jpg  
Bird.jpg
```

The cursor is positioned at the end of the last line of input. The terminal window is set against a background image of tall grass.

Step04

The program will do some calculations which may take some time. After which it will display an image in a window as well as some instructions in the terminal.

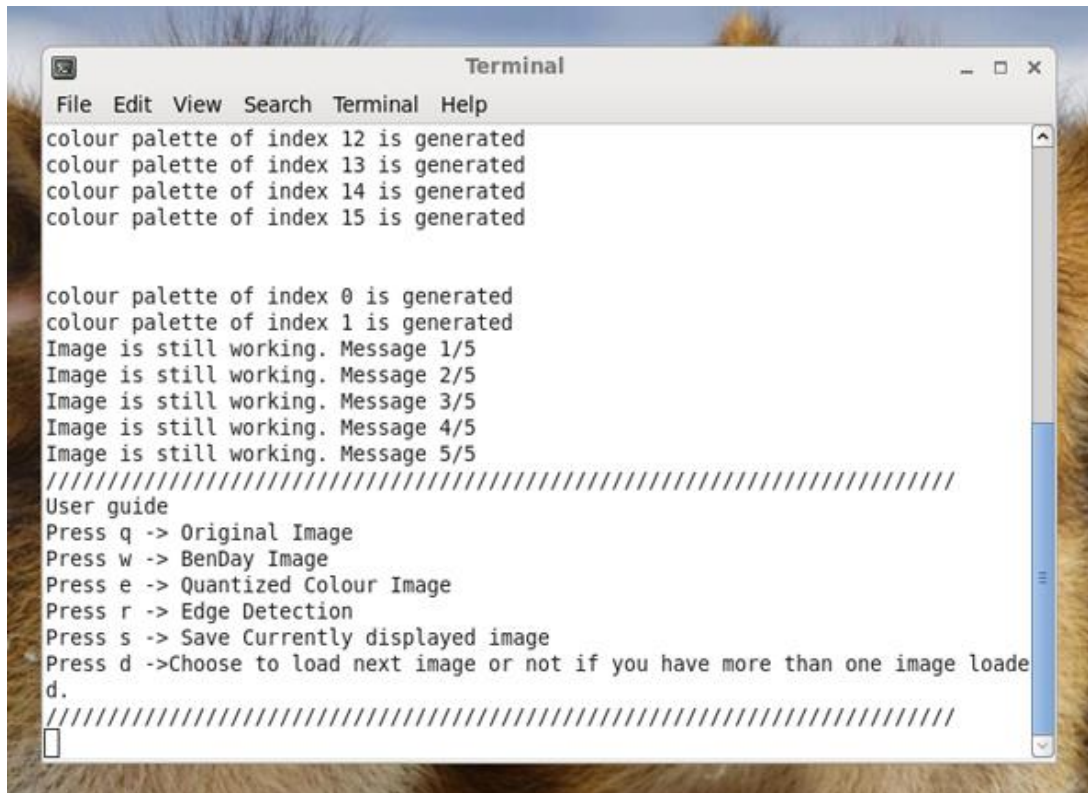
By pressing the various keys, you can display the respective images

Q = Original Image

W = BenDay Image

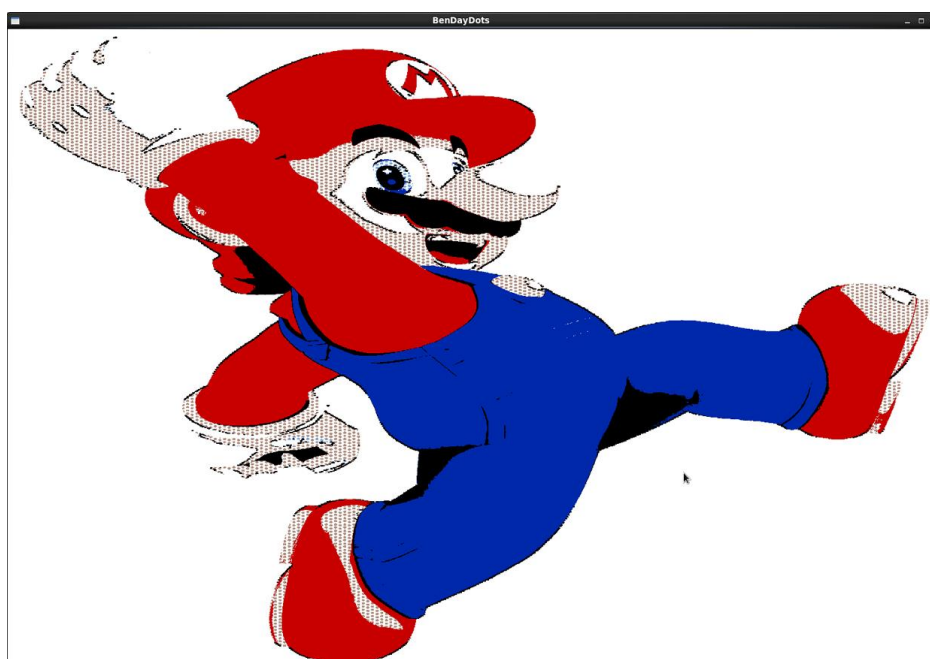
E = Quantized Colour Image

R = Edge Detection



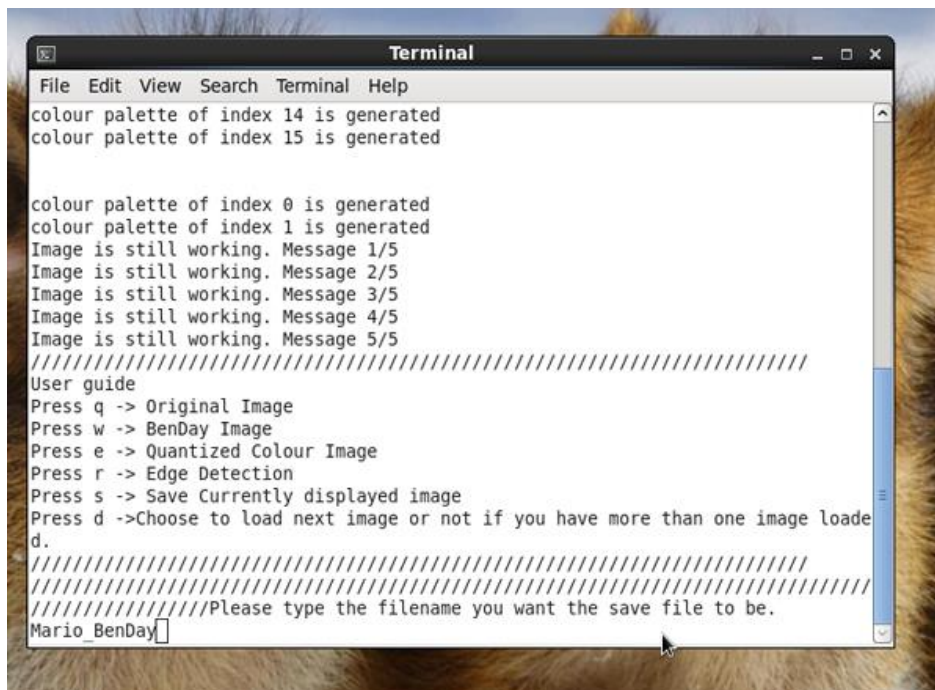
```
Terminal
File Edit View Search Terminal Help
colour palette of index 12 is generated
colour palette of index 13 is generated
colour palette of index 14 is generated
colour palette of index 15 is generated

colour palette of index 0 is generated
colour palette of index 1 is generated
Image is still working. Message 1/5
Image is still working. Message 2/5
Image is still working. Message 3/5
Image is still working. Message 4/5
Image is still working. Message 5/5
////////////////////////////////////
User guide
Press q -> Original Image
Press w -> BenDay Image
Press e -> Quantized Colour Image
Press r -> Edge Detection
Press s -> Save Currently displayed image
Press d -> Choose to load next image or not if you have more than one image loaded.
////////////////////////////////////
█
```



Step05

You can save any of the 4 displayable pictures by first displaying them on the window and press S. You will be asked to name your save file in the terminal. Press enter to complete the save.

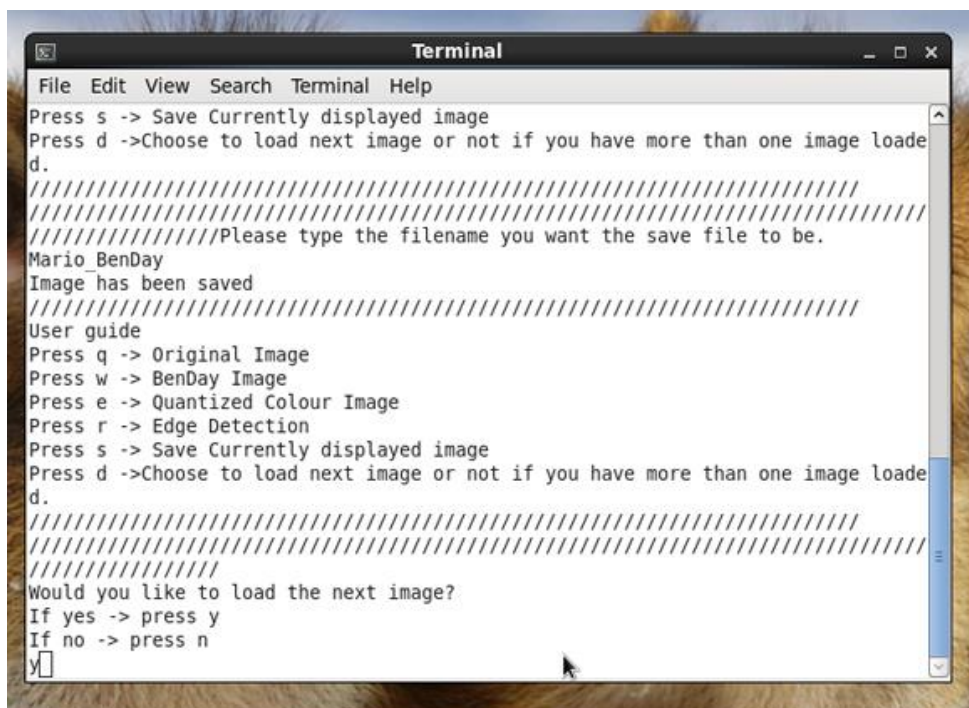


```
Terminal
File Edit View Search Terminal Help
colour palette of index 14 is generated
colour palette of index 15 is generated

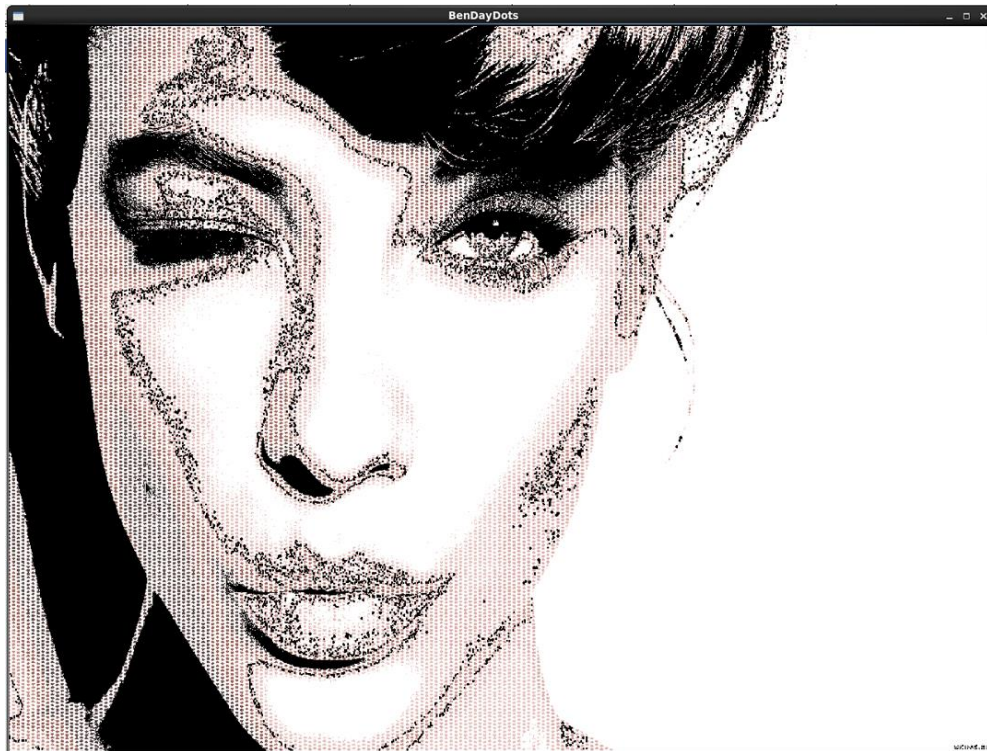
colour palette of index 0 is generated
colour palette of index 1 is generated
Image is still working. Message 1/5
Image is still working. Message 2/5
Image is still working. Message 3/5
Image is still working. Message 4/5
Image is still working. Message 5/5
////////////////////////////////////
User guide
Press q -> Original Image
Press w -> BenDay Image
Press e -> Quantized Colour Image
Press r -> Edge Detection
Press s -> Save Currently displayed image
Press d -> Choose to load next image or not if you have more than one image loaded.
////////////////////////////////////
////////////////////////////////////
////////////////////////////////////
////////////////////////////////////
Please type the filename you want the save file to be.
Mario_BenDay
```

Step06

If you have uploaded more than one picture, the d key will be enabled. You can press the d button in the window and in the terminal it will ask if you would like to load the next file. Press Y for yes and N for no. If you press N, the d button will be disabled.



```
Terminal
File Edit View Search Terminal Help
Press s -> Save Currently displayed image
Press d -> Choose to load next image or not if you have more than one image loaded.
////////////////////////////////////
////////////////////////////////////
////////////////////////////////////
Please type the filename you want the save file to be.
Mario_BenDay
Image has been saved
////////////////////////////////////
User guide
Press q -> Original Image
Press w -> BenDay Image
Press e -> Quantized Colour Image
Press r -> Edge Detection
Press s -> Save Currently displayed image
Press d -> Choose to load next image or not if you have more than one image loaded.
////////////////////////////////////
////////////////////////////////////
////////////////////////////////////
Would you like to load the next image?
If yes -> press y
If no -> press n
y
```

```
Terminal
File Edit View Search Terminal Help

colour palette of index 0 is generated
colour palette of index 1 is generated
Image is still working. Message 1/5
Image is still working. Message 2/5
Image is still working. Message 3/5
Image is still working. Message 4/5
Image is still working. Message 5/5
////////////////////////////////////
User guide
Press q -> Original Image
Press w -> BenDay Image
Press e -> Quantized Colour Image
Press r -> Edge Detection
Press s -> Save Currently displayed image
Press d -> Choose to load next image or not if you have more than one image loaded.
////////////////////////////////////
////////////////////////////////////
////////////////////////////////////
Would you like to load the next image?
If yes -> press y
If no -> press n
n
```