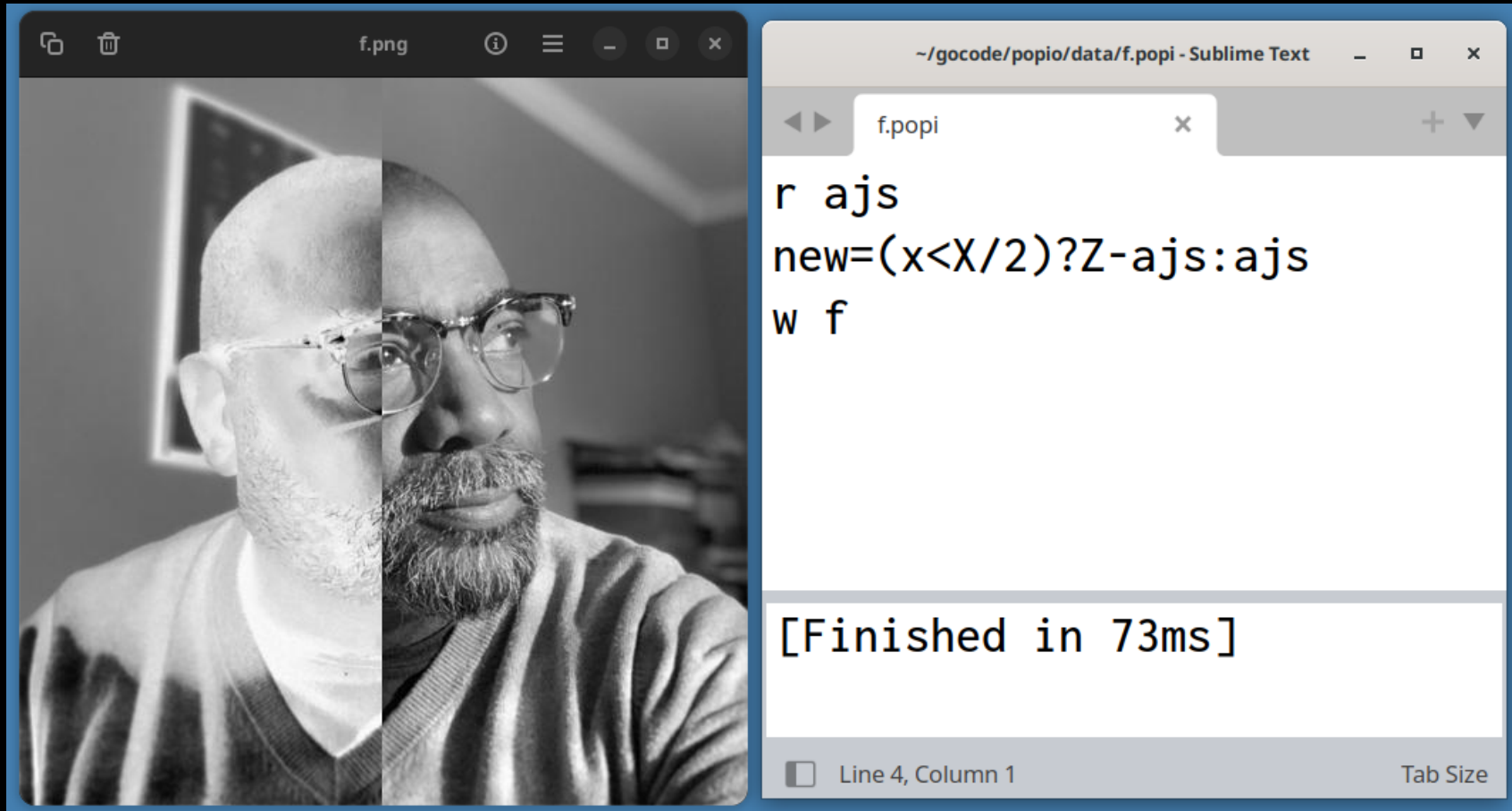# Interactive Image Manipulation with popi
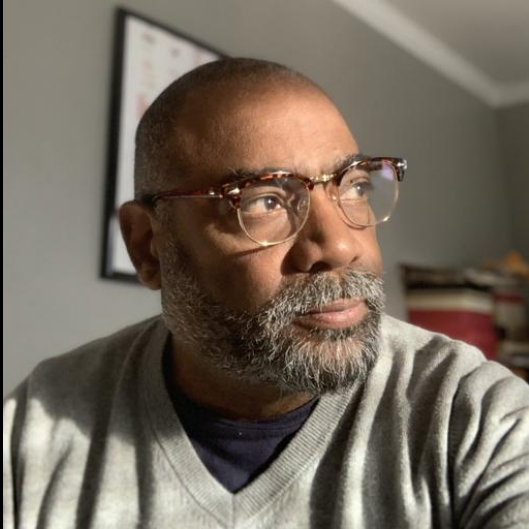
popi (portable pico)

popi is the portable version of the pico editor, as described in "Beyond Photography — The Digital Darkroom" by Gerard Holzmann.

popi works with square, 8-bit (0-255, black-white) raw grayscale images.

popio (popi I/O)

```
popio -import < ajs.jpg > ajs   run popi   popio -export < ajs > f.png
```


original image

raw image

edited image

popio is a Go program to import and export popi images. popio reads from stdin and writes to stdout in two modes; (1) read images (JPEG or PNG) writing to raw, and (2) read raw files and write to PNG.

Set up

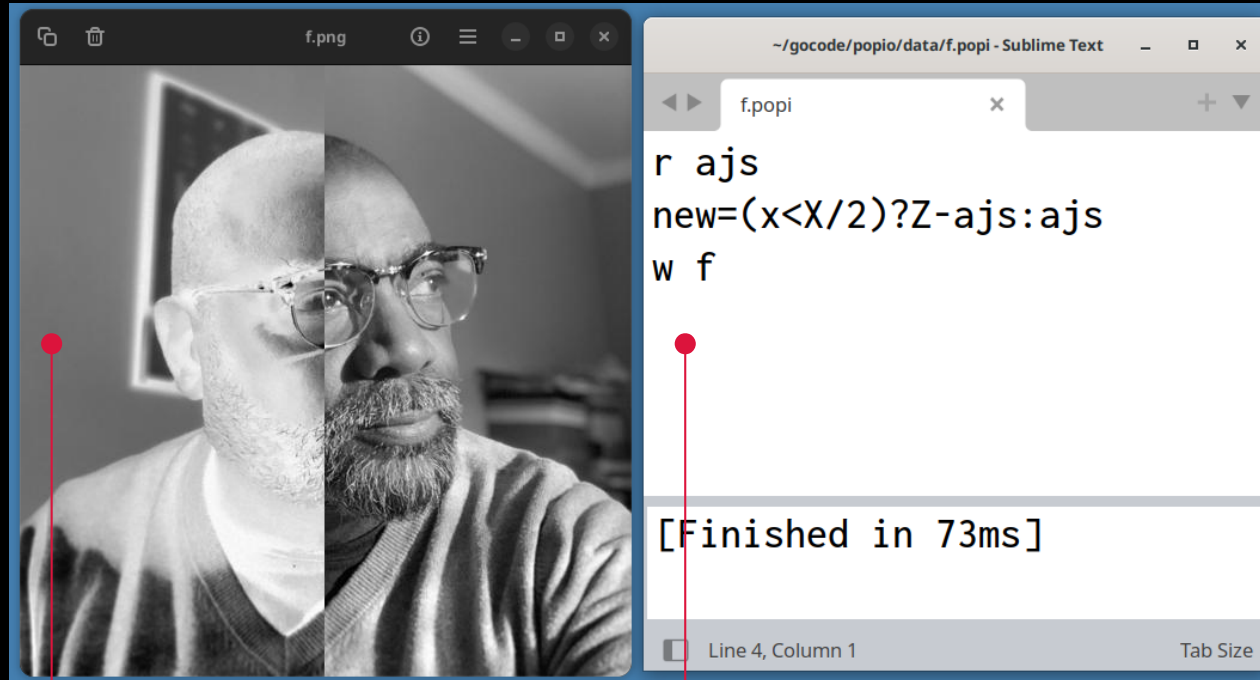Loupe   Sublime Text
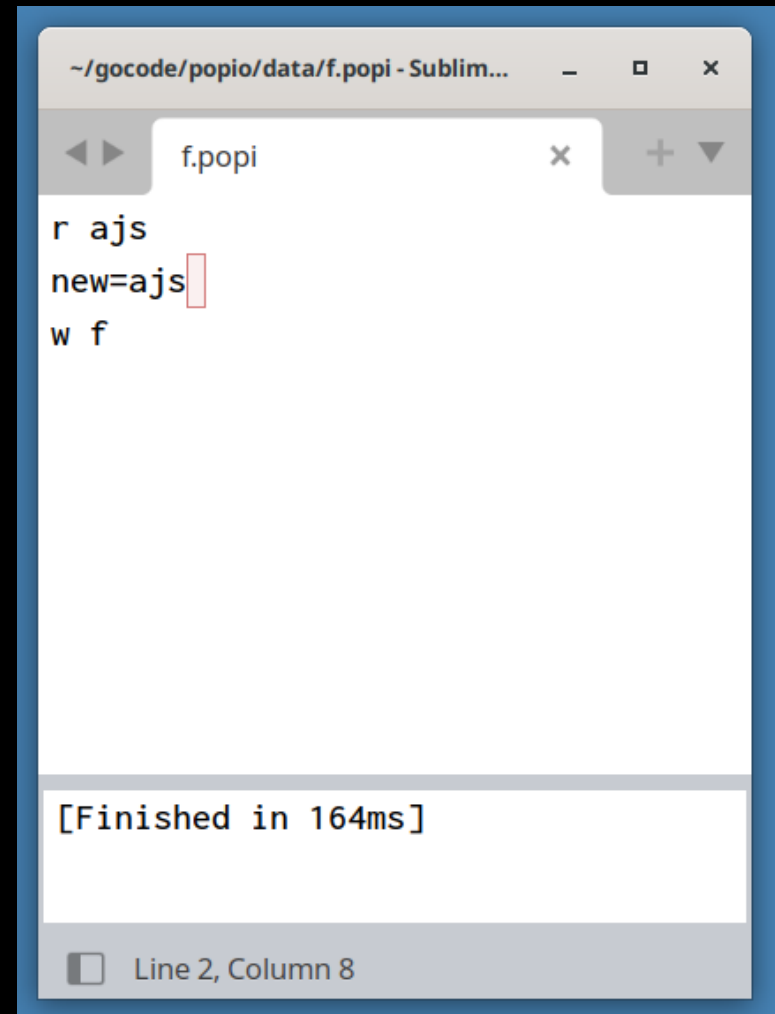

image in viewer   popi script in editor

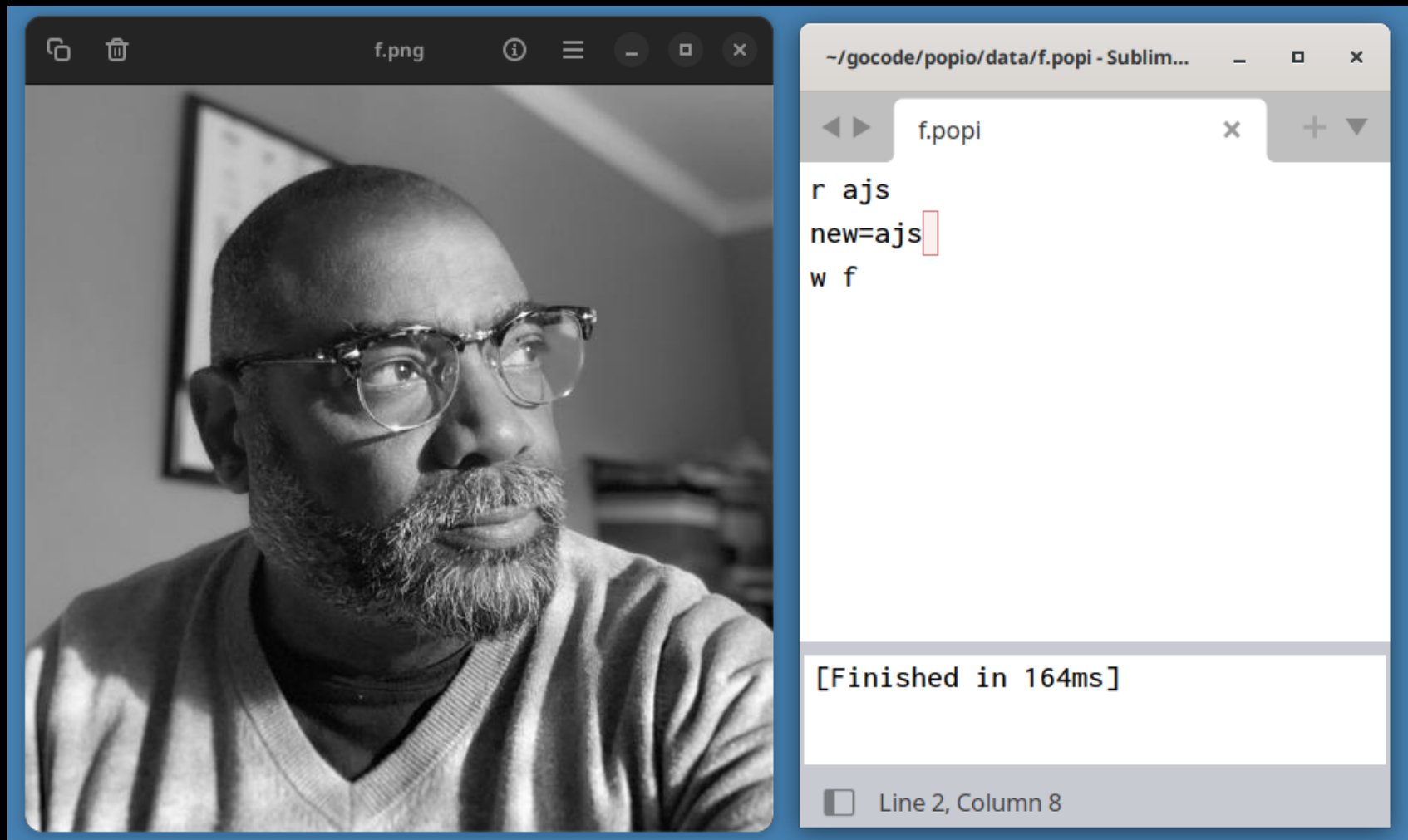`f.png`   `popi < $file; popio -export < f > f.png`

Running the build system (Ctrl- or Cmd-B) within the editor runs the script,
making the output that is displayed in the viewer. To change the output,
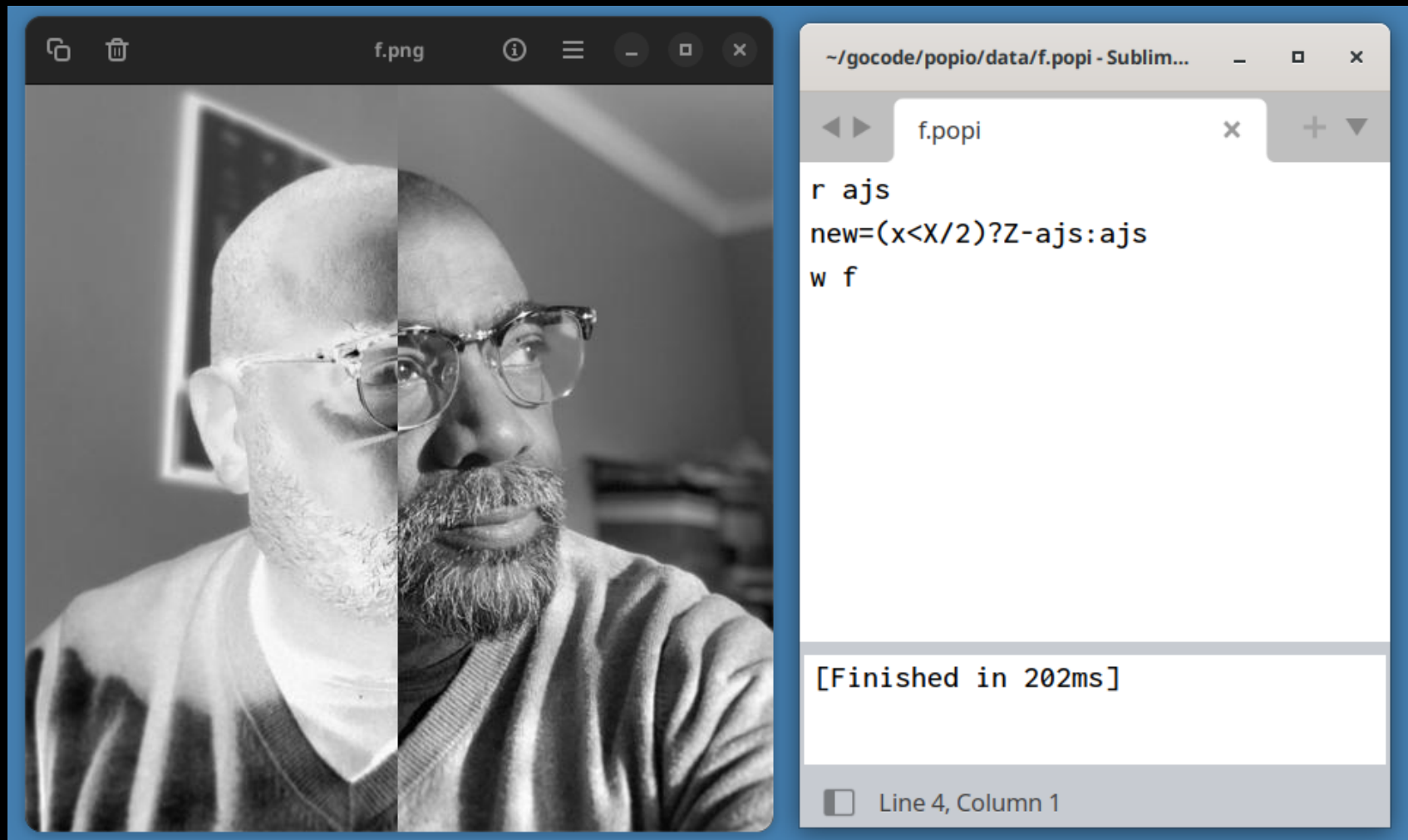edit the script and re-run the build.

Editor with popi code

```
~/gocode/popio/data/f.popi - Sublim...    _    □    ✕

◄ ►    f.popi                          ✕    +  ▼

r ajs
new=ajs
w f




[Finished in 164ms]


□  Line 2, Column 8
```

Editor and Image

Update and re-build

~/gocode/popio/data/f.popi - Sublim...

f.popi

```
r ajs
new=(x<X/2)?Z-ajs:ajs
w f
```

[Finished in 202ms]

Line 4, Column 1

Building popi

Go to https://www.netlib.com/popi/, download bundle and
face1.uu

```
$ sh bundle                    # expand shell archive
$ uudecode face1.uu            # decode image to raw format
# change DEF_X and DEF_Y in popi.h to specify image size
$ gcc -std=c89 -o popi *.c -lm # build popi
$ ./popi                       # run popi
-> r face1
-> new=face1
-> w f
-> q
$ popio -export -width 248 -height 248 < f > f.png
$ open f.png
```


face1