Image process Flow chart

Input file → arr[][] → new Image → Image object → Image process operations → Image Object w/ modified rgb values → getPixels() → arr[][] → write → output file

```
jpg
file
```
extract →
```
rgb
values
```
→ new Image →
```
Image
object
```

Image process operations →

grayscale()
invert()
blur()
⋮

```
Image
Object
w/ modified
rgb values
```
→ getPixels() →
```
rgb
values
```
→ write →
```
jpg
file
```

original image

modified image
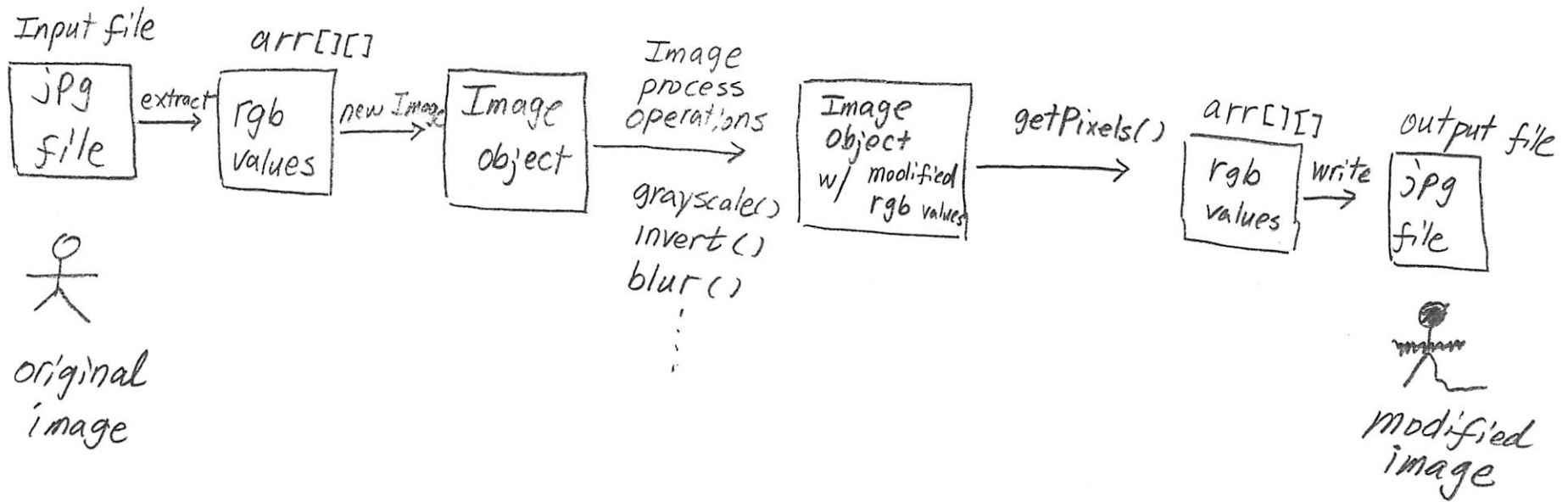

Extract pixel values

A pixel value is an integer containing the values of four components (α, red, green, blue)

α indicates opacity of a pixel.

Opacity — α | red | green | blue

(11111111)

Opacity	α	red	green	blue
	31 30 ... 24 23	16 15 14 8	7 ... 2 1 0	
	8 bits	8	8	8

32 bits

* A mask x0.FF takes each component out of the integer (32 bits) by performing bit-wise "&" operation.

* A bit-wise or "|" operation packs four components into a 32-bit integer required by Java BufferImage's setRGB method.