

bitwise operations

$$\begin{array}{r} 1011 \\ \& 0101 \\ \hline 0001 \end{array}$$

$$\begin{array}{r} 1011 \\ \& 0101 \\ \hline 1111 \end{array}$$

&	0	1
0	0	0
1	0	1

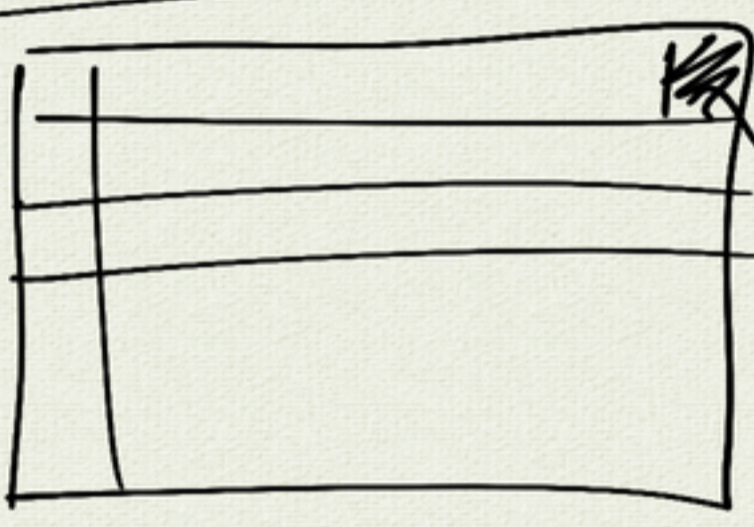
0xA7 & 0xFA

0	0
1	01
2	10
3	11
4	100
5	101
6	110
7	111
8	1000
9	1001
10	1010
11	1011
12	1100
13	1101
14	1110
15	1111

$$\begin{array}{r} \& \begin{array}{c} A7 \\ FA \end{array} \\ \hline \begin{array}{r} 1010.0111 \\ \& 1111.1010 \\ \hline 10100010 \end{array} \end{array}$$

bitmask

$$\begin{array}{r} 1010.0111 \\ \& 0000.1111 \\ \hline 00000111 \end{array}$$



int[][]

→ 0xAARRGGBB

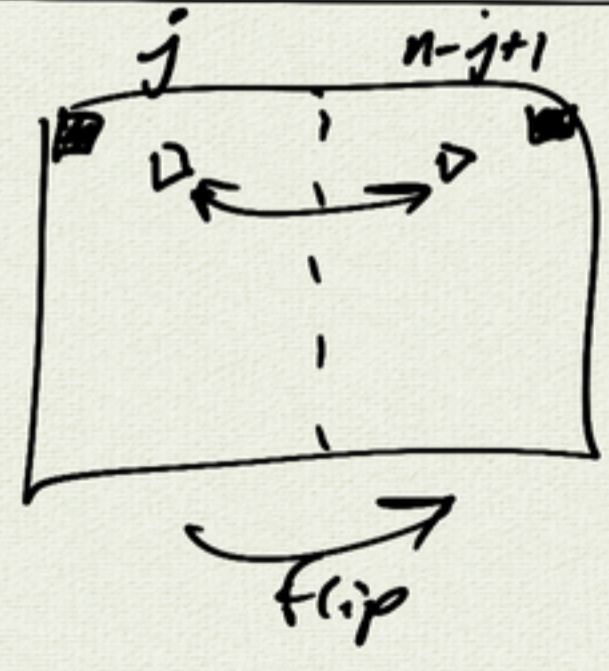
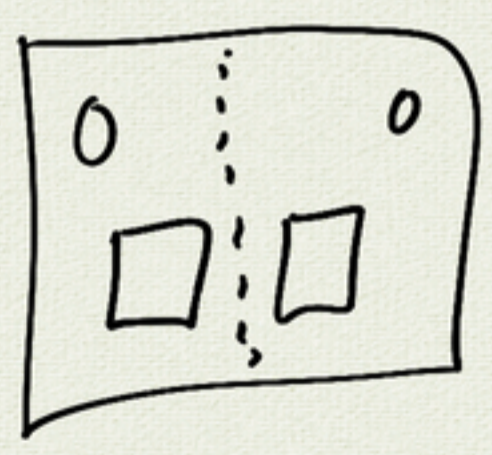
⇒ get red:

$$\begin{array}{r} c = 0xFF123456 \\ \& 00FF0000 \\ \hline 00120000 \end{array}$$

$\xrightarrow[8]{}$ $\xrightarrow[8]{}$

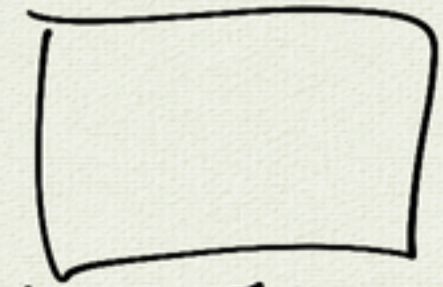
```
code: int c = 0xFF123456;
int r = (c & 0x00FF0000) >> 16;
```

bitwise and shift



PImage

int[] pixels →



loadPixels()
updatePixels()

int[][] pixelArray