

# 图像处理入门基础

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CSDN

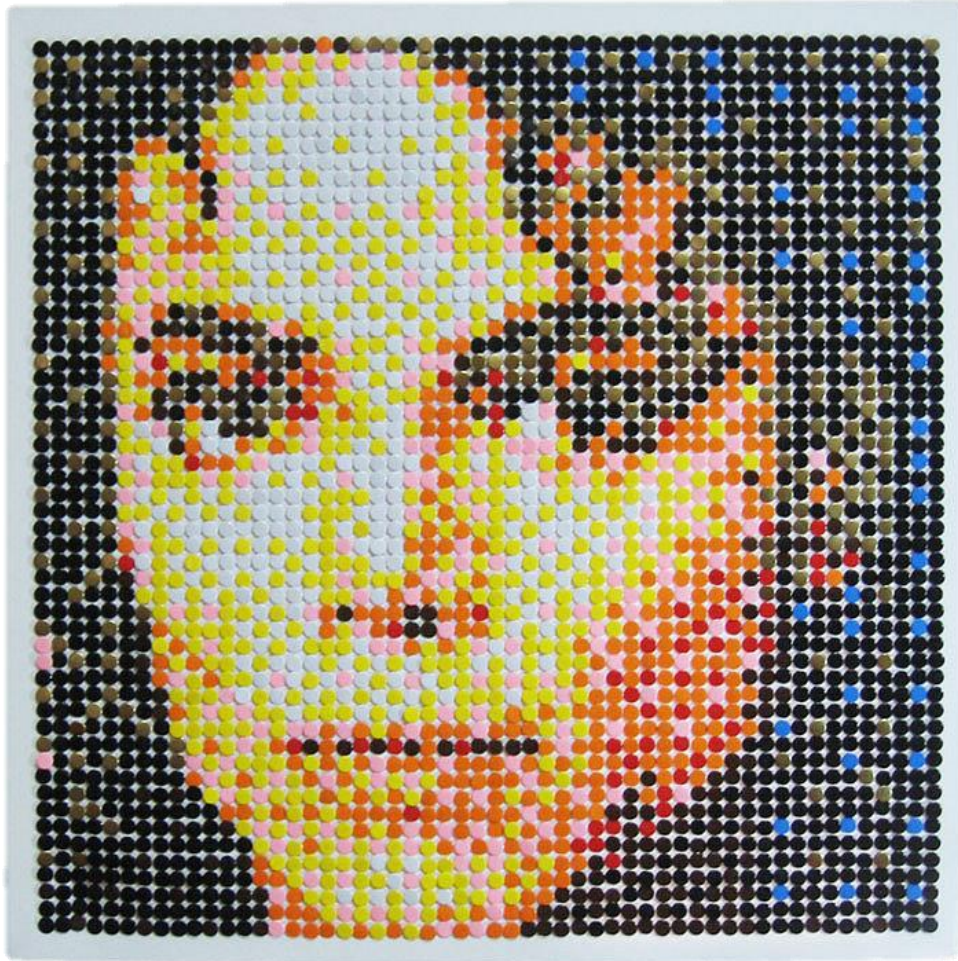


# 图像是由像素构成的





# 图像是由像素构成的



# 图像分类



二值图像

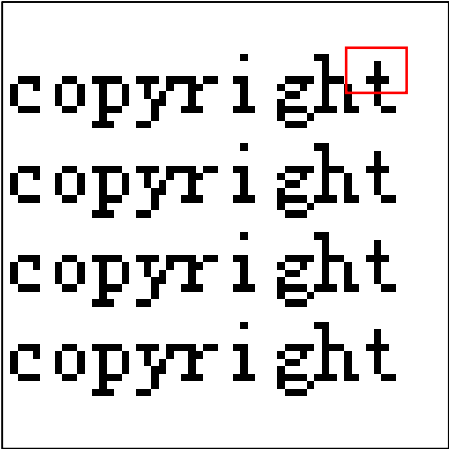


灰度图像



RGB图像

# 二值图像



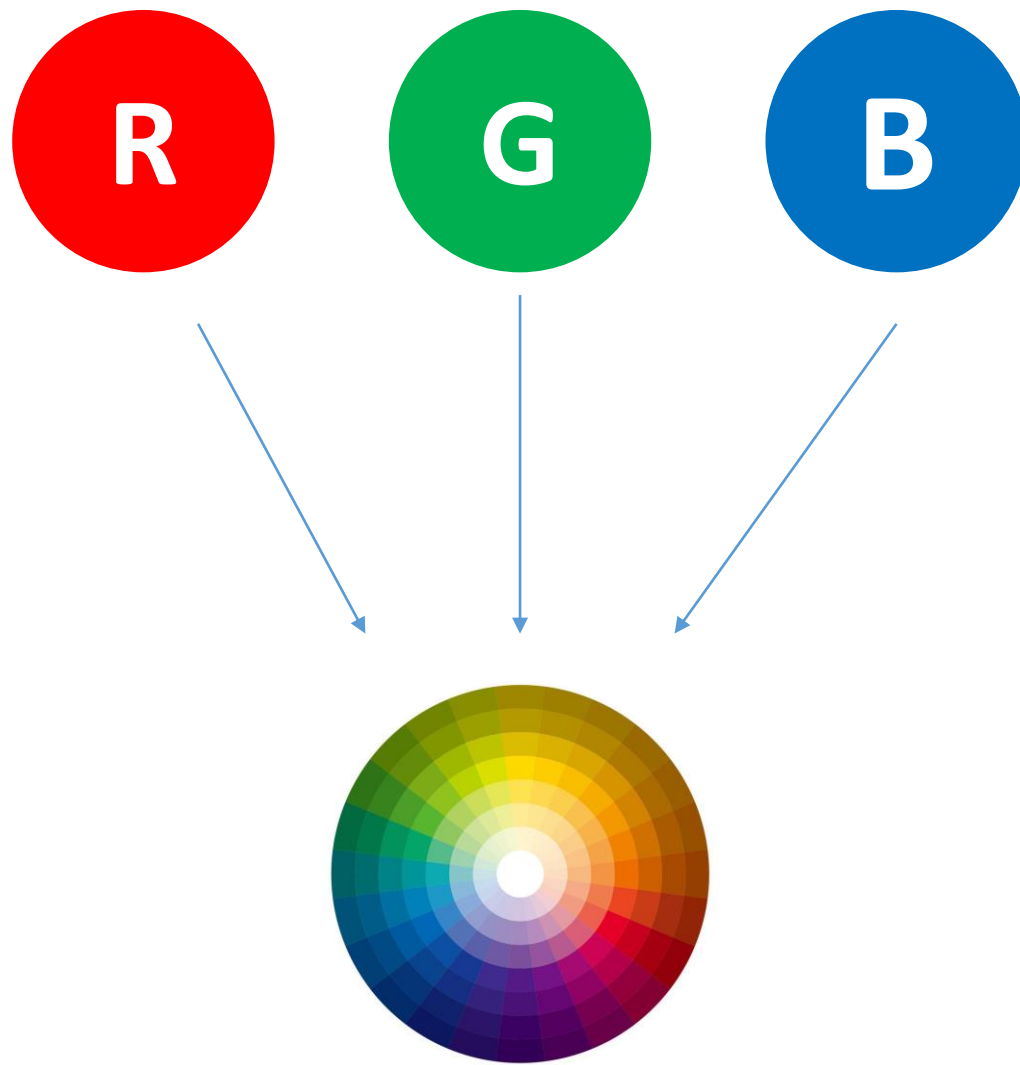
1	0	1	0
1	1	0	1
0	0	0	0
1	1	0	1

# 灰度图像

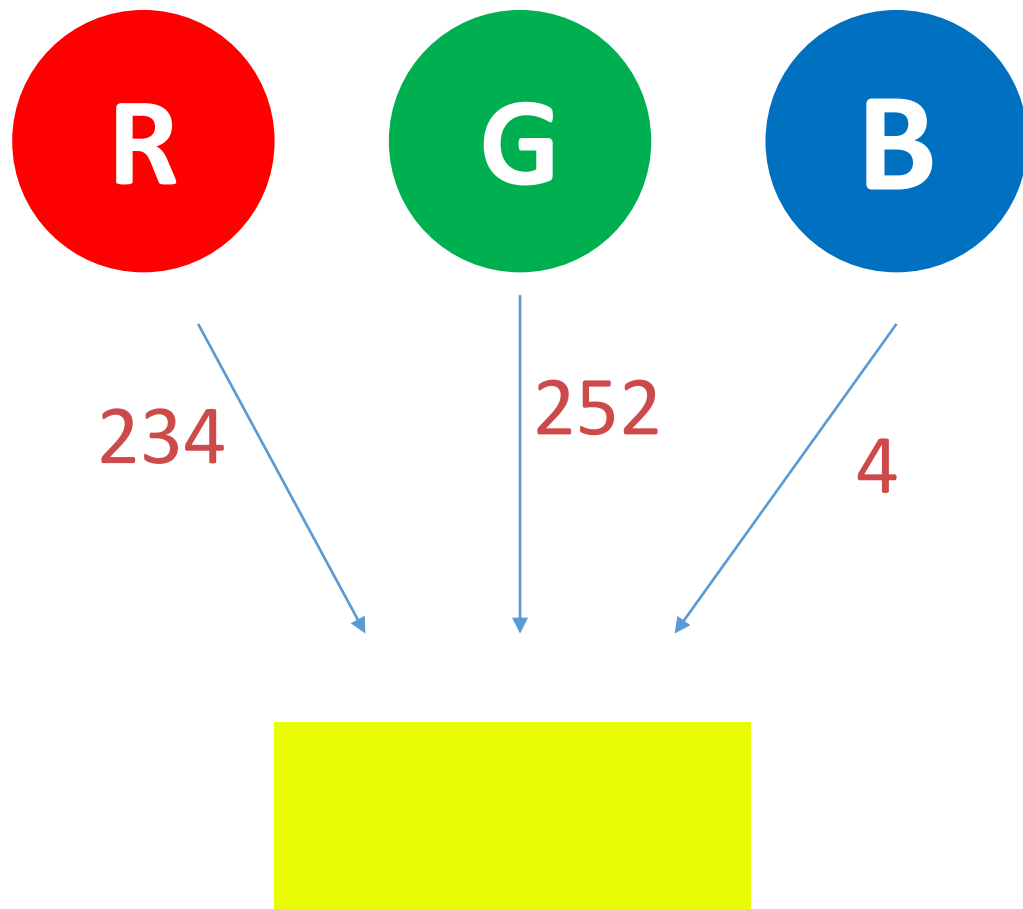


209	197	163	193
125	247	160	112
161	137	243	203
39	82	154	127

# 彩色图像

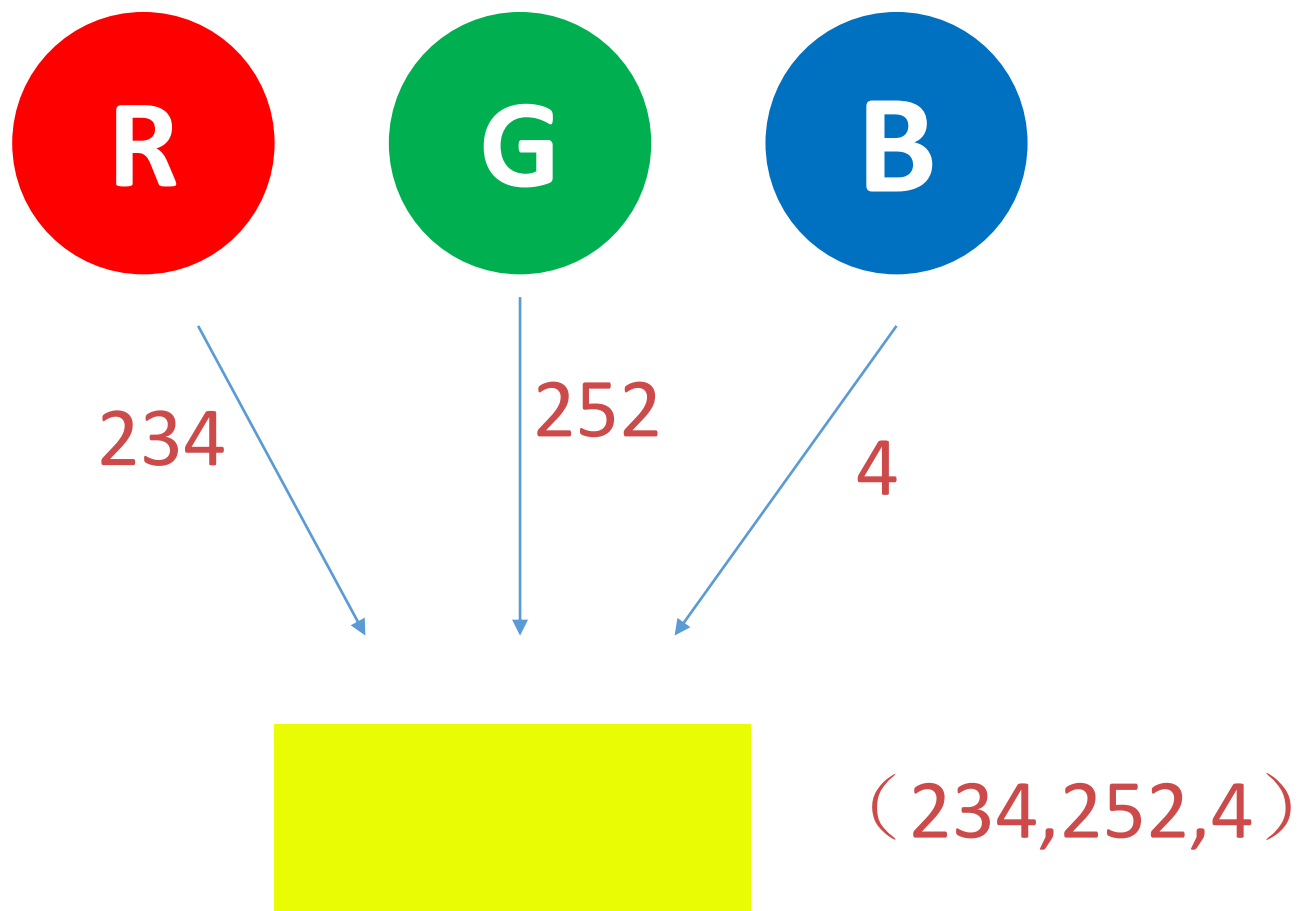


# 彩色图像

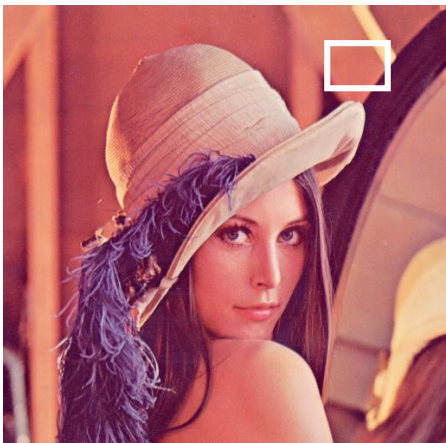




# 彩色图像

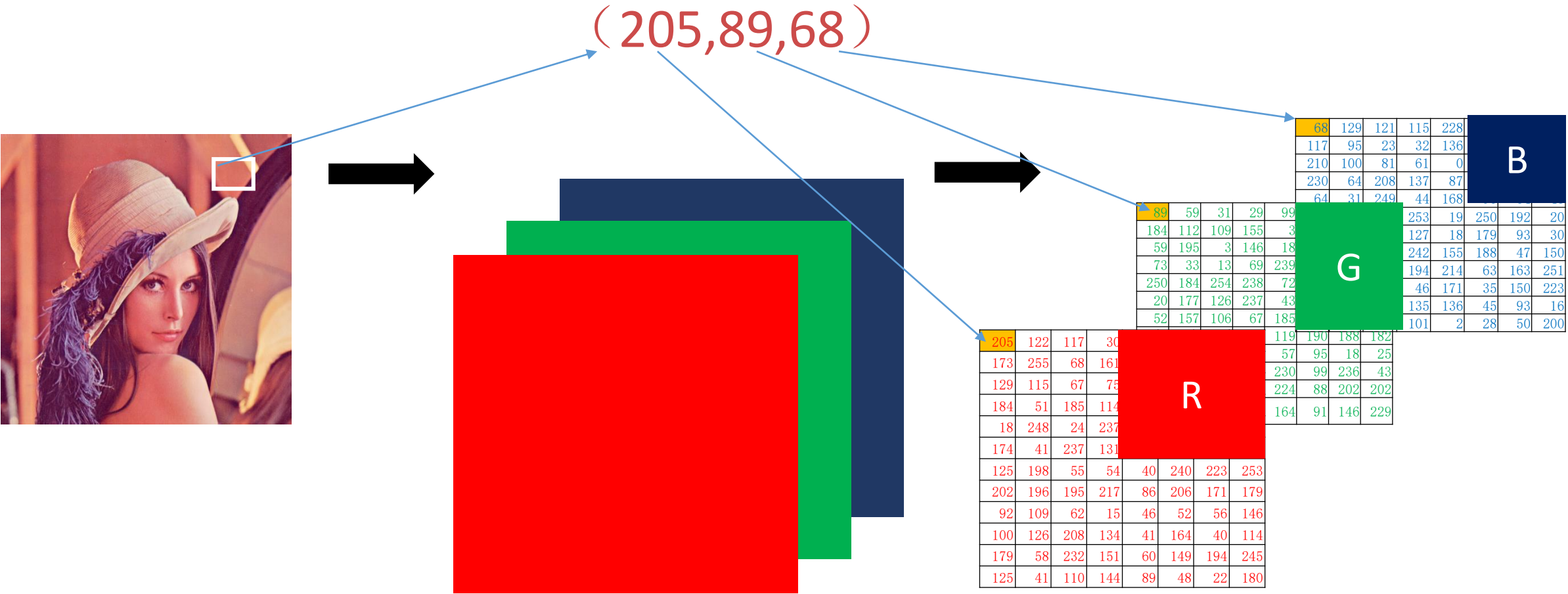


## 彩色图像 (RGB)

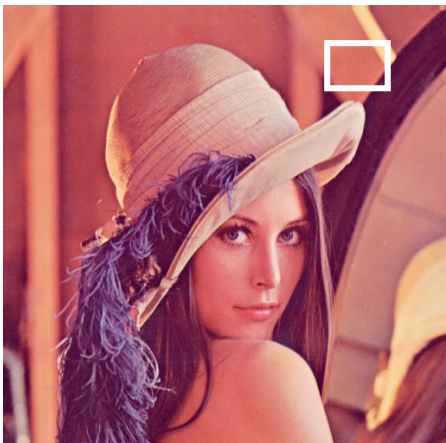


The diagram illustrates the memory layout of a 2D array A (10x10) and its corresponding row-major traversal path. The array is divided into four quadrants: top-left (blue), top-right (dark blue), bottom-left (red), and bottom-right (green). The traversal path starts at the top-left corner and proceeds in a row-major fashion, indicated by a large black arrow pointing right. The path is marked by a sequence of numbers: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99. The path ends at the bottom-right corner.

# 彩色图像 (RGB)



## 彩色图像 (BGR)



The diagram illustrates the process of matrix multiplication. It shows three matrices: A (5x10), B (10x5), and C (5x5). The result of the multiplication is shown as a 5x5 grid of numbers. The matrices are labeled A, B, and C. An arrow points from matrix A to matrix B, and another arrow points from matrix B to matrix C.

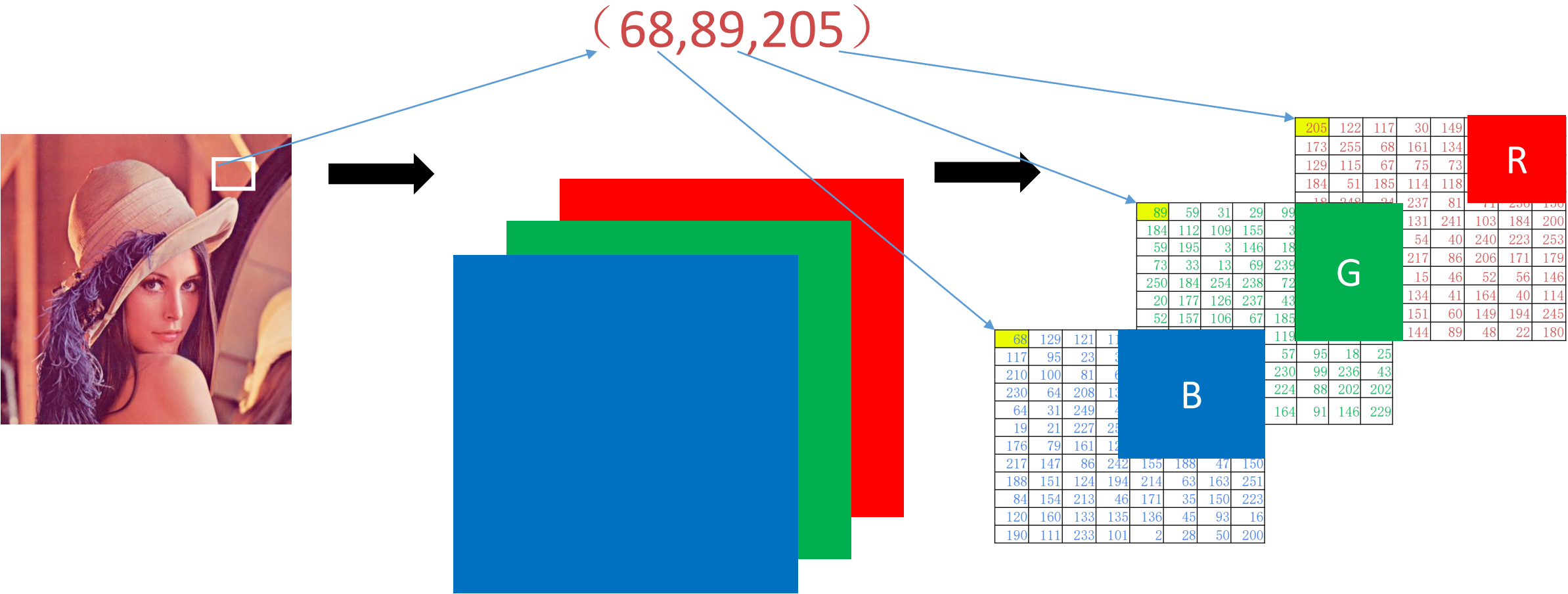
68	129	121	11	119	57	95	18	25	
117	95	23	3	230	230	99	236	43	
210	100	81	6	224	224	88	202	202	
230	64	208	13	164	164	91	146	229	
64	31	249	4						

19	21	227	25	
176	79	161	12	
217	147	86	242	155
188	151	124	194	214
84	154	213	46	171
120	160	133	135	136
190	111	233	101	2
				28
				50
				200

205	122	117	30	149
173	255	68	161	134
129	115	67	75	73
184	51	185	114	118
18	248	24	237	81

131	241	103	184	200
54	40	240	223	253
217	86	206	171	179
15	46	52	56	146
134	41	164	40	114

# 彩色图像 (BGR)





# RGB转灰度

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原始图像



灰度图像



# 灰度转二值

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原始图像



二值化图像



# OpenCV+Python图像处理

—— 图像处理利器 ——

