영상처리 과제 **#3**

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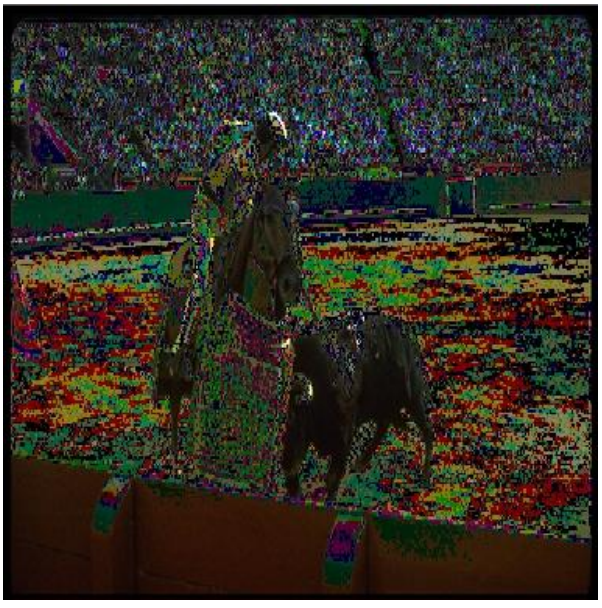
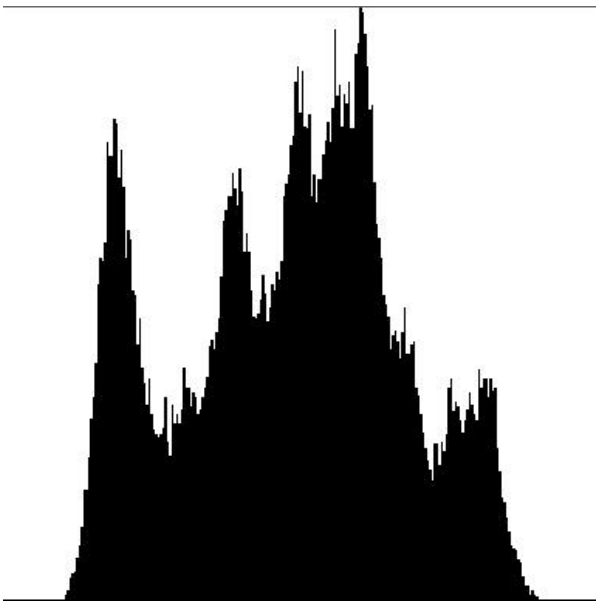
< 실습 A >

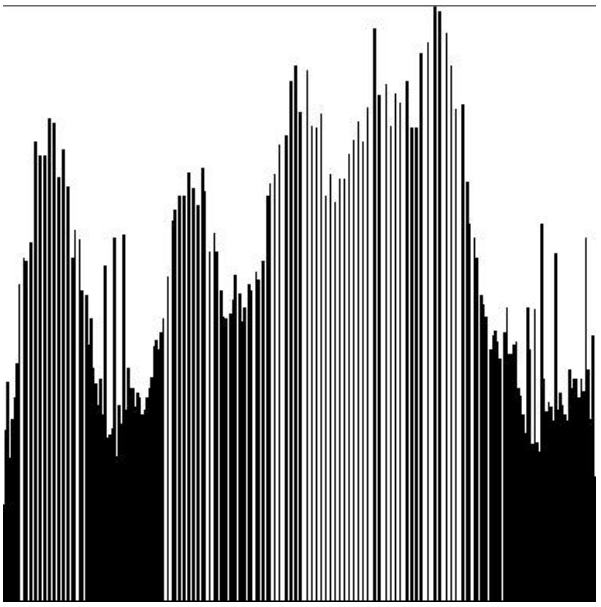


< 실습 B >

< 실습 C >

< 실습 D >

< 코드 >

< List2_1.c >

```
/* initialize Look-up table */
    for (i = 0; i < 256; i++)
    {
        /* preserve an original image or y is equal to x */
        temp = i;

        /* Negative image */
        // temp = 255 - i

        /* Contrast Stretching */
        // temp = (float)i * 2 - 128;
```

```
        /* Compression */
        // temp = (float)i / 2 + 128;

        /* Posterized */
        // temp = (i / 32) * 32;

        /* Threshold */
        /*
        if (i > 128) temp = 255;
        else temp = 0;
        */

        /* Bounded Threshold */
        /*
        if (128 < i && i <= 200) temp = 200;
        else if (50 < i && i <= 128) temp = 50;
        else temp = i;
        */

        /* Iso-intensity contouring */
        /*
        if (60 < i && i < 80) temp = 0;
        else if (100 < i && i < 120) temp = 0;
        else if (140 < i && i < 160) temp = 0;
        else if (180 < i && i < 200) temp = 0;
        else temp = i;
        */

        /* Solarize */
        /*
        if (i > 128) temp = 255 - i;
        else temp = i;
        */

        CLIP(temp, 0, 255);     // 맵핑된 후의 밝기 레벨(L) 값이 0 보다 작거나, 255 보다 크면
안되기 때문에.
        LUT[i] = temp;          // LUT[i] 에 temp 값을 초기화.
    }
```

< Iplib.c - histogram_equalize() >

```
unsigned long max = 0;

/* find a max */
        for (i = 0; i < 256; i++) {
                if (histogram[i] > max) {
                        max = histogram[i];
                }
```

```
}

/* normalization */
for (i = 0; i < 256; i++) {
        histogram[i] = histogram[i] / (float)max * 255;
}

/* make a graph */
for (i = 0; i < number_of_pixels; i++) {
        if ((255 - i / 256) > histogram[i % 256])
                buffer[i] = 255;
        else
                buffer[i] = 0;
}
```