영상처리 실제 - 3주차 과제

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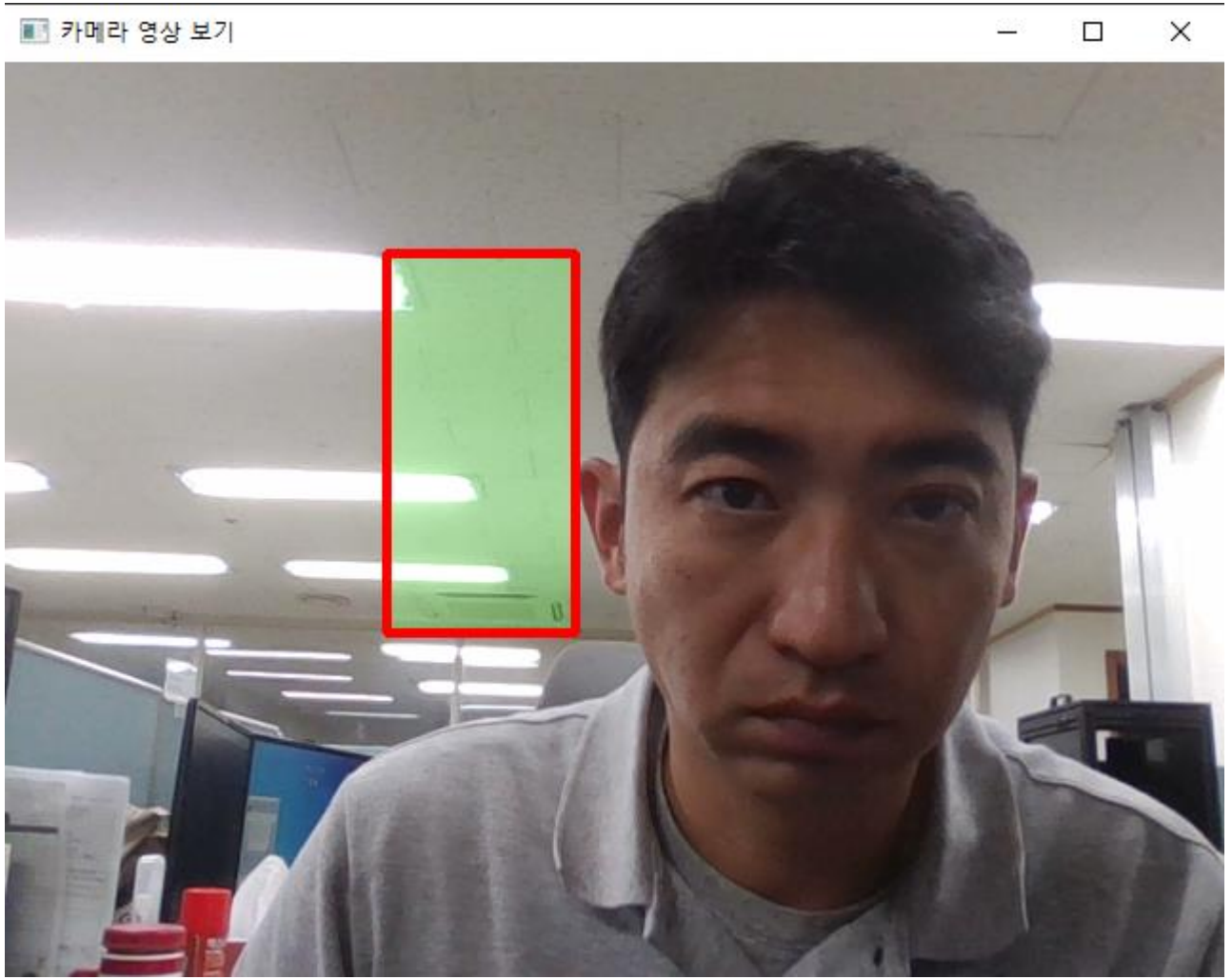
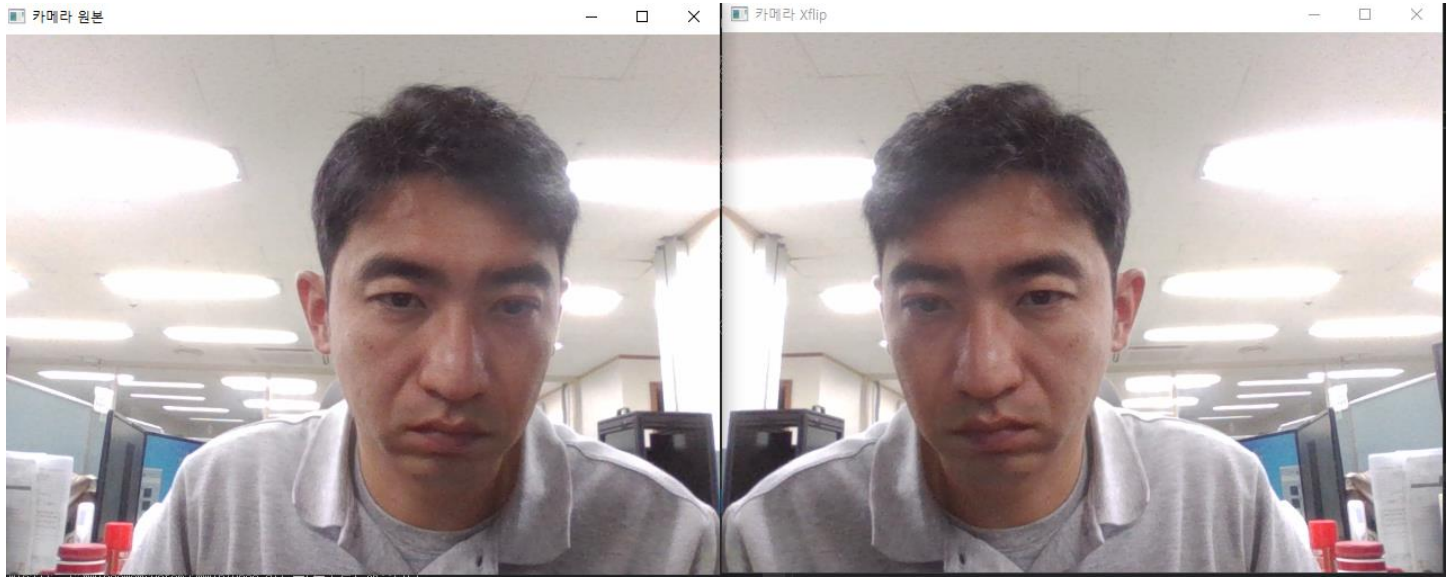
- OpenCV의 기초(3) - p.27 – HW1

```
    //(3) - 27 Page
    //HW1
#if 1

    VideoCapture capture(0);
    if (!capture.isOpened())
    {
        cout << "카메라가 연결 되지 않았습니다." << endl;
        exit(1);
    }
    Rect roi(200, 100, 100, 200);
    Scalar red(0, 0, 255);

    for (;;)
    {
        Mat frame;

        capture.read(frame);

        Mat roiImage(frame, roi);

        roiImage += Scalar(0, 50, 0);

        rectangle(frame, roi, red, 3); //사각형 그리기

        imshow("카메라 영상 보기", frame);

        if (waitKey(30) >= 0) break;
    }

#endif
```



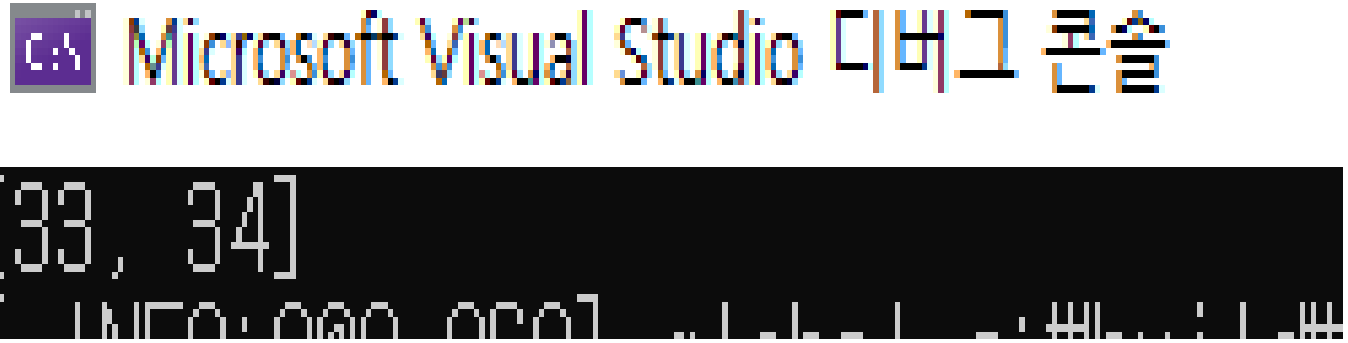
- OpenCV의 기초(3) - p.27 – HW2

```
#if 1
    VideoCapture capture(0);
    if (!capture.isOpened());

    double fps = 15;
    int delay = cvRound(1000.0 / fps);
    Size size(640, 480);
    int fourcc = VideoWriter::fourcc('D', 'I', 'V', 'X');

    capture.set(CAP_PROP_FRAME_WIDTH, size.width);
    capture.set(CAP_PROP_FRAME_HEIGHT, size.height);

    VideoWriter writer;//동영상파일 저장 객체

    //파일 개발 및 설정
    writer.open("D:\\flip_test.avi", fourcc, fps, size);
    CV_Assert(writer.isOpened());

    for (;;)
    {
        Mat frame;
        capture >> frame; //카메라영상받기

        Mat xFlip;
        flip(frame, xFlip, 1);//좌우 flip
        writer << xFlip; //프레임을 동영상으로 저장

        imshow("카메라 원본", frame);
        imshow("카메라 Xflip", xFlip);
        if (waitKey(delay) >= 0)
        {
            break;
        }
    }
#endif
```



- OpenCV의 기초(4) - p.35 – HW1

```
#if 1
    Range r1(2, 3), r2(3, 5);

    int data[] = {
        10,11,12,13,14,15,16,
        20,21,22,23,24,25,26,
        30,31,32,33,34,35,36,
        40,41,42,43,44,45,46,
    };

    Mat m1(5, 7, CV_32S, data);

    cout << m1(r1, r2) << endl;

    waitKey(0);
```



- OpenCV의 기초(4) - p.35 – HW2

```
  //HW2
if 1
  Mat array_100(10, 15, CV_16U, Scalar(100));
  Rect roi_200(3, 1, 5, 4), roi_555(5, 3, 5, 4), roi_300(7, 5, 5, 4);

  Mat temp_1 = array_100(roi_200);
  temp_1 = Scalar(200);

  Mat temp_2 = array_100(roi_300);
  temp_2 = Scalar(300);

  Mat temp_3 = array_100(roi_555);
  temp_3 = Scalar(555);

  cout << array_100 << endl;


  waitKey(0);
```

Microsoft Visual Studio 디버그 콘솔

```
[100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100;
 100, 100, 100, 200, 200, 200, 200, 200, 100, 100, 100, 100, 100, 100, 100;
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 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100]
[ INFO:0@0.070] global c:₩build₩master_winpack-build-win64-vc14₩opencv₩module
ighgui_backend::UIBackendRegistry::UIBackendRegistry UI: Enabled backends(4,
GTK2(980); WIN32(970) + BUILTIN(WIN32UI)
[ INFO:0@0.070] global c:₩build₩master_winpack-build-win64-vc14₩opencv₩module
) cv::plugin::impl::DynamicLib::libraryLoad load D:₩1.????₩2.????????₩2.23?2?
_H₩₩x64₩Debug₩opencv_highgui_gtk460_64.dll => FAILED
[ INFO:0@0.071] global c:₩build₩master_winpack-build-win64-vc14₩opencv₩module
```