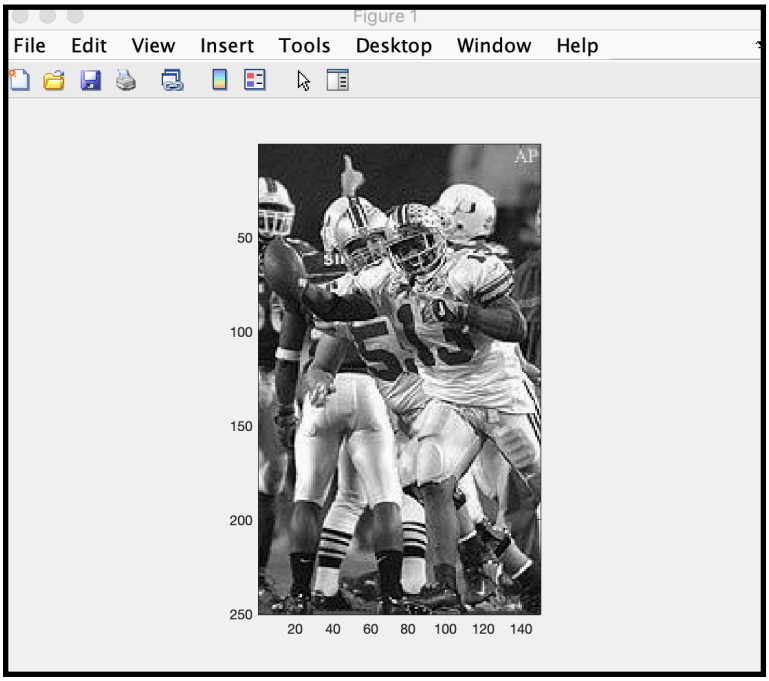
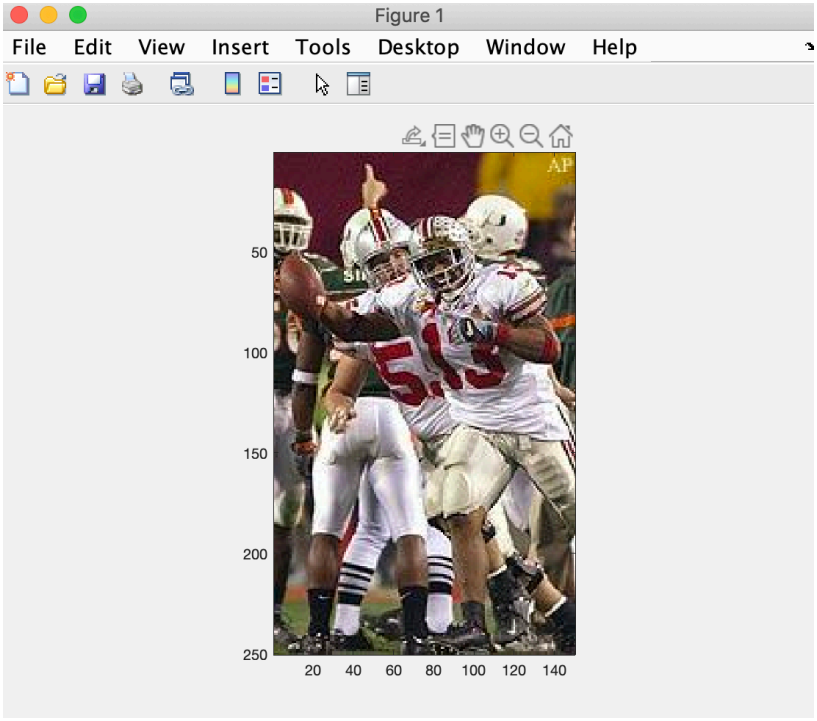
CSE 5524 HW1

Problem 1

```
%% Problem 1
grayIm = imread('buckeyes_gray.bmp');
imagesc(grayIm);
axis('image');
colormap('gray');
imwrite(grayIm,’buckeyes_gray.jpg');
pause;
```



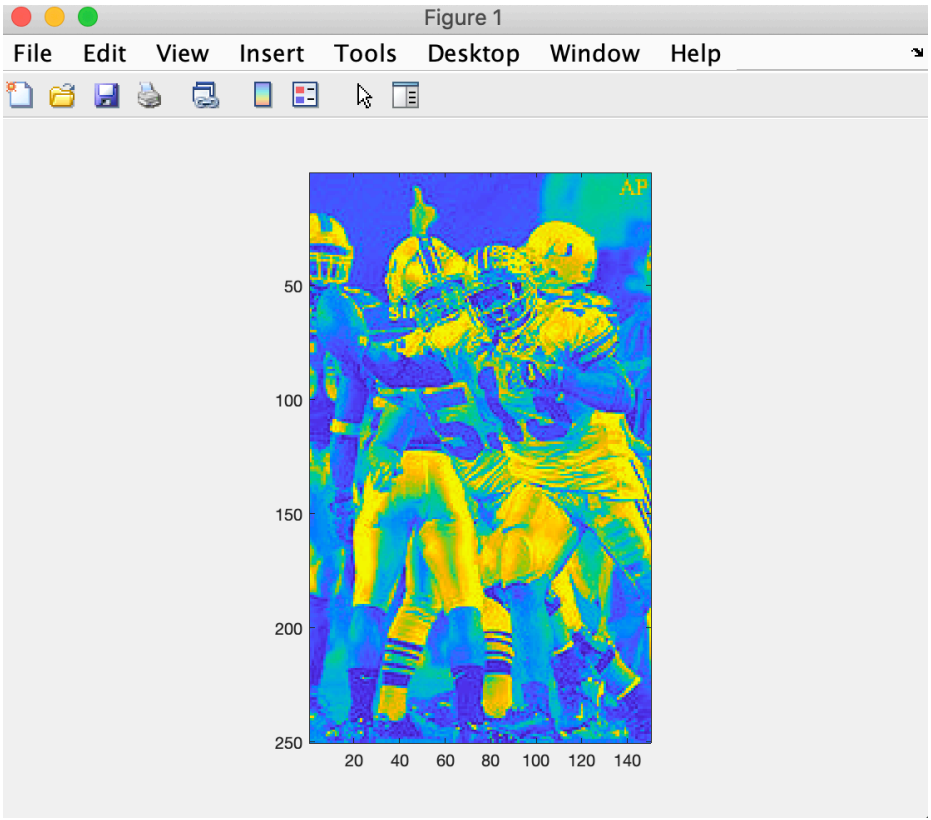

```
rgbIm = imread('buckeyes_rgb.bmp');
imagesc(rgbIm);
axis('image');
imwrite(rgbIm,’buckeyes_rgb.jpg’);
```



Problem 2

```
%% Problem 2
graylm2 = rgb2gray(rgblm);
imagesc(graylm2);
axis('image')
if (isequal(graylm,graylm2))
    fprintf("same matrix value as in previous grayscaled image by converting\n");
else
    fprintf("not same matrix value as in previous grayscaled image by converting\n");
end
```

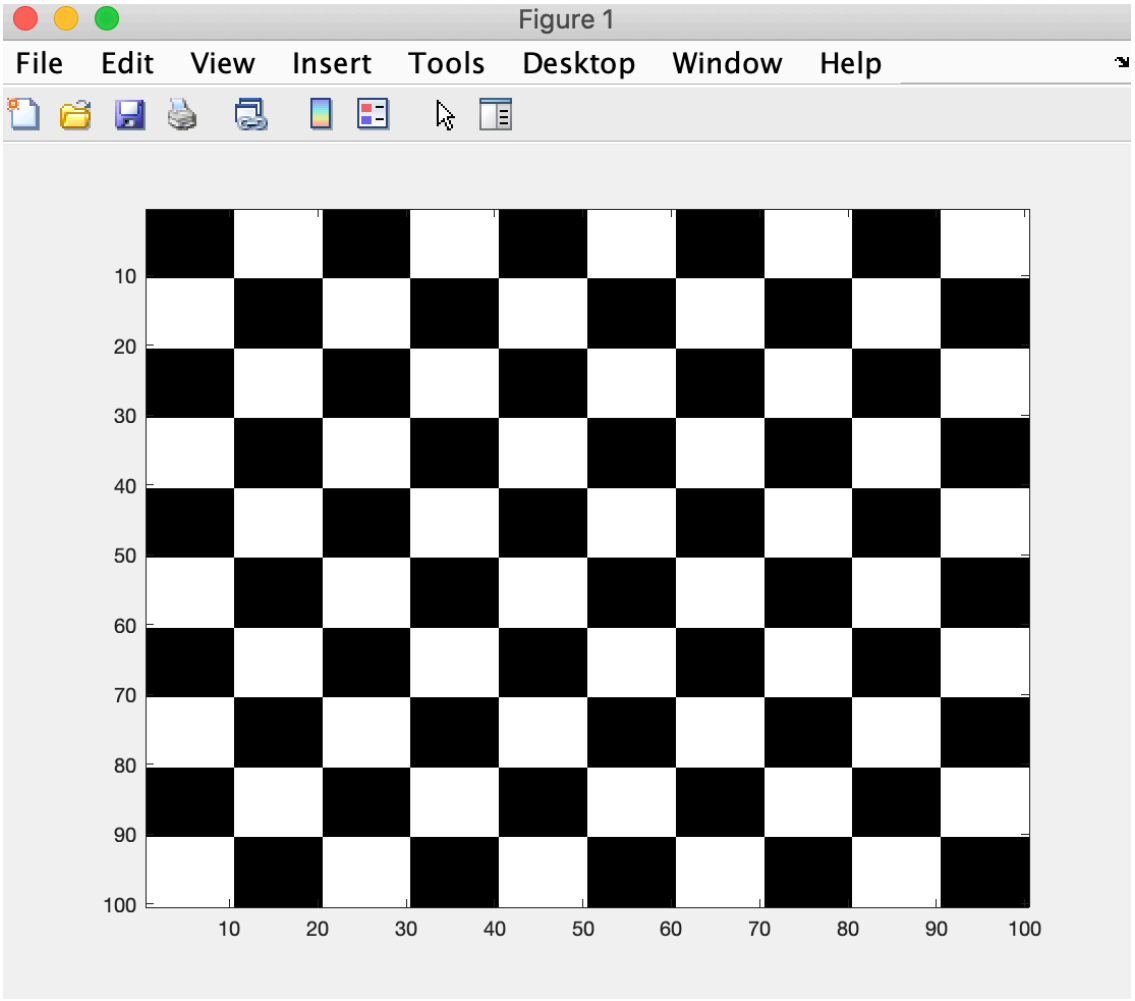
output: not same matrix value as in previous grayscaled image by converting



Observations for Problem 2: The printed image looks similar with the printed images in the previous questions if setting colormap to gray. However, the actually pixel value is not the same for these two images.

Problem 3

```
zBlock = zeros(10,10);
oBlock = ones(10,10)*255;
pattern = [zBlock oBlock; oBlock zBlock];
checkerIm = repmat(pattern,5,5);
imwrite(uint8(checkerIm),'checkerIm.bmp');
Im = imread('checkerIm.bmp');
imagesc(Im);
colormap(‘gray');
```



Discussion: I followed the instructions provided by Professor Davis. I do find some difficulty transforming MATLAB code to Python code.