

CSE 5524 HW1

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1)

Code:

```
global rgbIm
grayIm = Image.open("buckeyes_gray.bmp")
pdb.set_trace()
grayIm.show()
grayIm.save("buckeyes_gray.jpg")

rgbIm = Image.open('buckeyes_rgb.bmp')
rgbIm.show()
rgbIm.save("buckeyes_rgb.jpg")
```

Input Image:



Output Image:



2)

Code:

```
global rgbIm
grayIm = ImageOps.grayscale(rgbIm)
grayIm.show()
```

Input Image:



Output Image:



3)

Code:

```
zBlock = np.zeros((10, 10), dtype=np.uint8)
oBlock = np.ones((10, 10), dtype=np.uint8) * 255
pattern = np.vstack((np.hstack((zBlock, oBlock)), np.hstack((oBlock,
zBlock))))
checkerIm = np.tile(pattern, (5, 5))
im = Image.fromarray(checkerIm)
im.save("checkerIm.bmp")
im = Image.open('checkerIm.bmp')
im.show()
```

Output Image:

