

**Muhammad Rizwan Khalid**

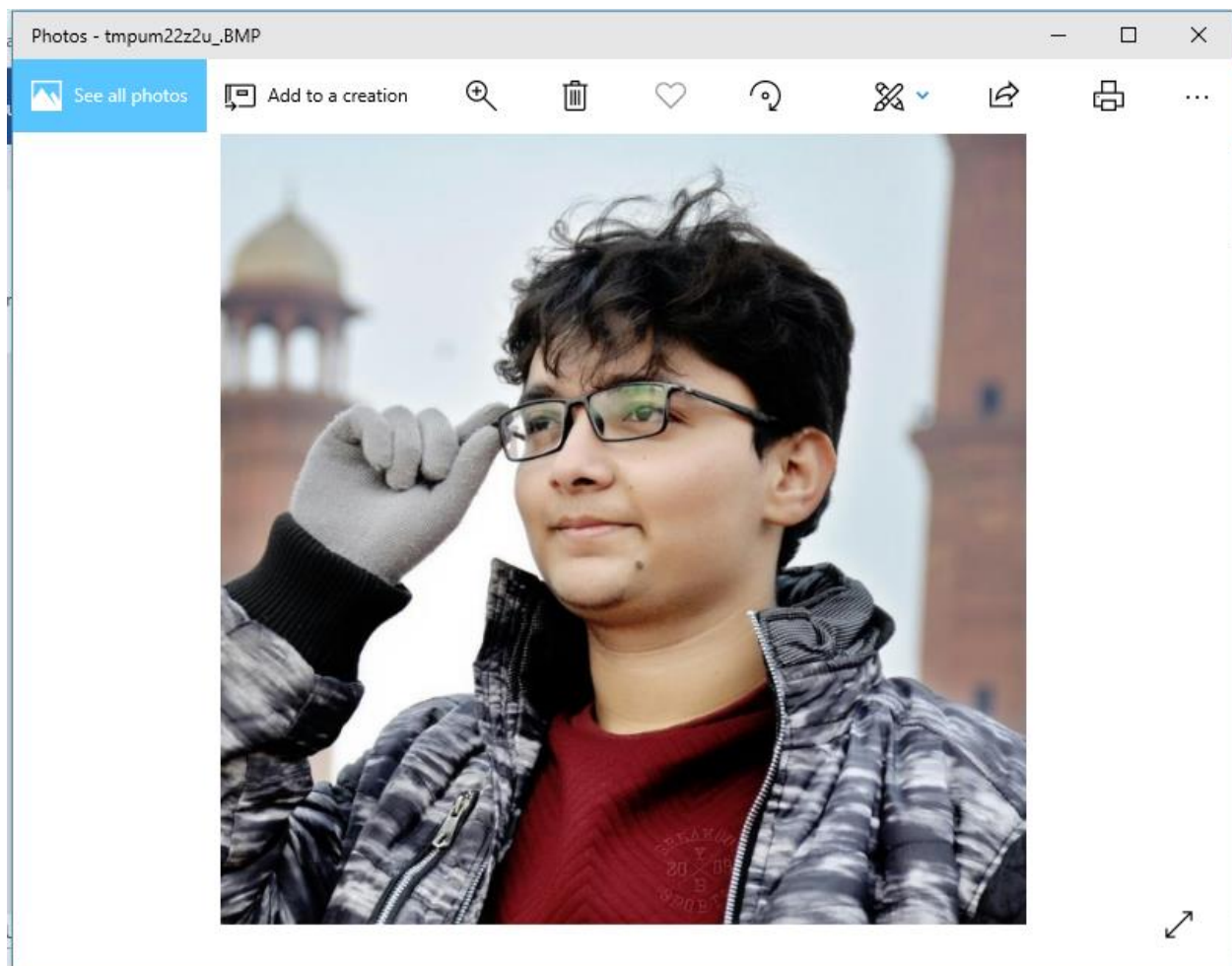
**BSCS – 6A**

**180459**

**Task: 01:**

```
import PIL  
from PIL import Image  
im = Image.open("1.jpg")  
print (im.format , im.size , im.mode)  
im.show()
```

**Screenshot:**



**Task: 02:**

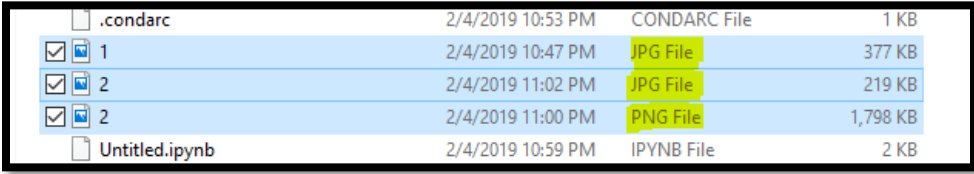
```
import os, sys
```

```

from PIL import Image
images = ["1.jpg", "2.png"]
for infile in images:
    f,e = infile.split(".")
    outfile = f + ".jpg"
    if infile != outfile:
        try:
            Image.open(infile).save(outfile)
        except IOError:
            print ("cannot convert", infile)

```

**Screenshot:**



<input type="checkbox"/>	.condarc	2/4/2019 10:53 PM	CONDARC File	1 KB
<input checked="" type="checkbox"/>	1	2/4/2019 10:47 PM	JPG File	377 KB
<input checked="" type="checkbox"/>	2	2/4/2019 11:02 PM	JPG File	219 KB
<input checked="" type="checkbox"/>	2	2/4/2019 11:00 PM	PNG File	1,798 KB
<input type="checkbox"/>	Untitled.ipynb	2/4/2019 10:59 PM	IPYNB File	2 KB

**Task: 03a:**

```

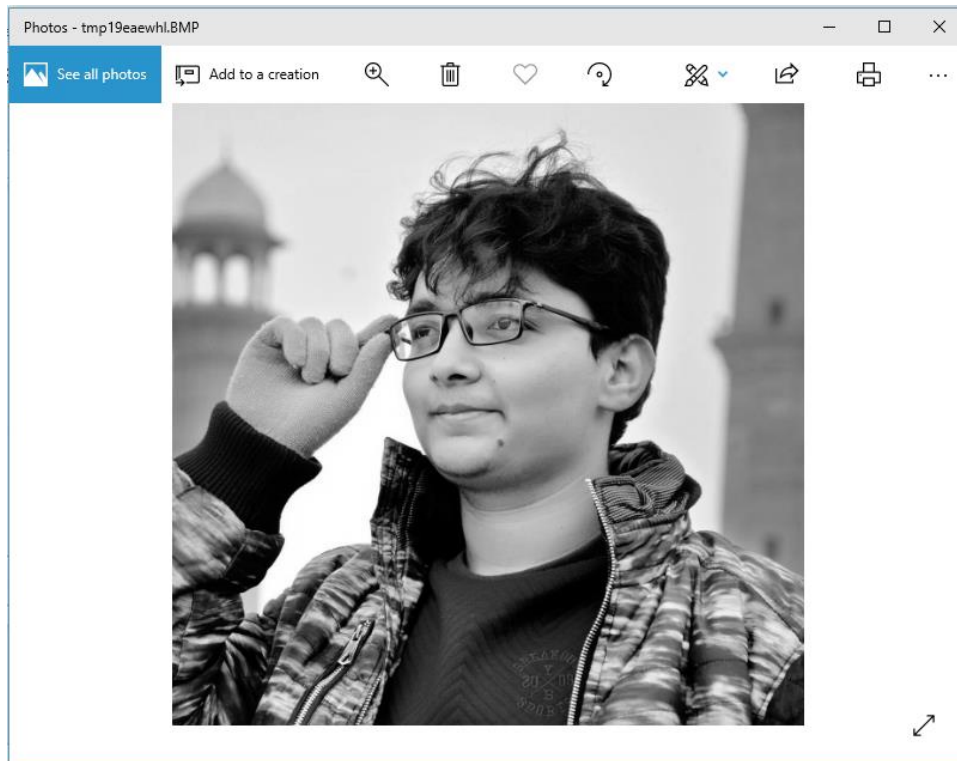
import os, sys

from PIL import Image

img = Image.open("1.jpg")
grey_scale_img = img.convert('L')
grey_scale_img.save("grey_img.jpg")
grey_scale_img.show()

```

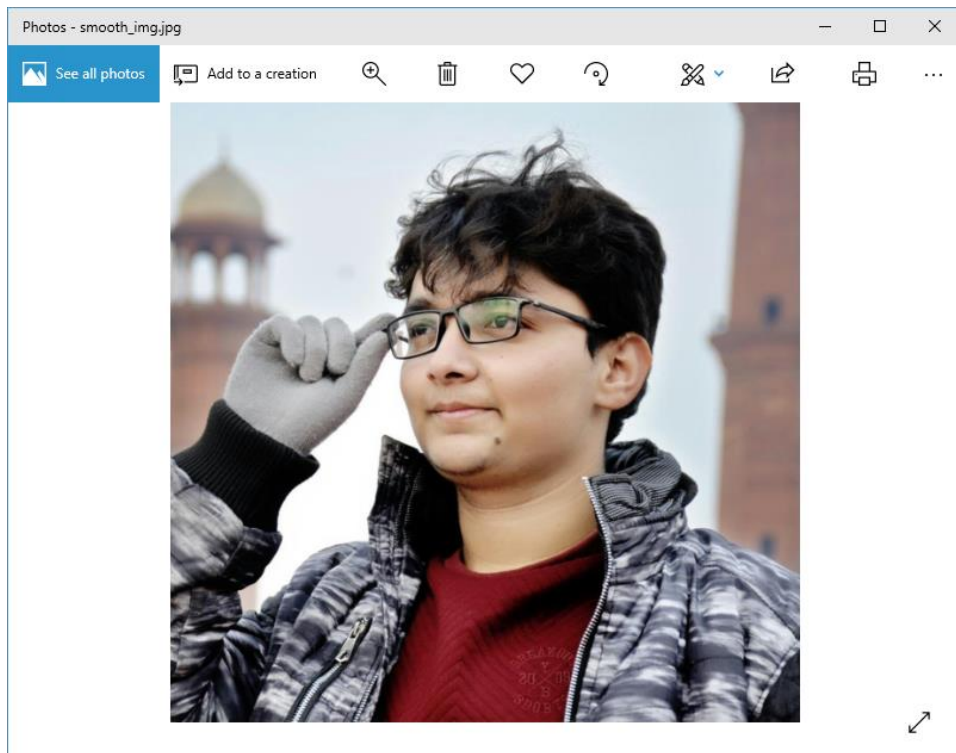
**Screenshot:**



**Task: 03b:**

```
import os, sys  
from PIL import Image, ImageFilter  
img = Image.open("1.jpg")  
smooth_img = img.filter(ImageFilter.SMOOTH)  
smooth_img.save("smooth_img.jpg")  
smooth_img.show()
```

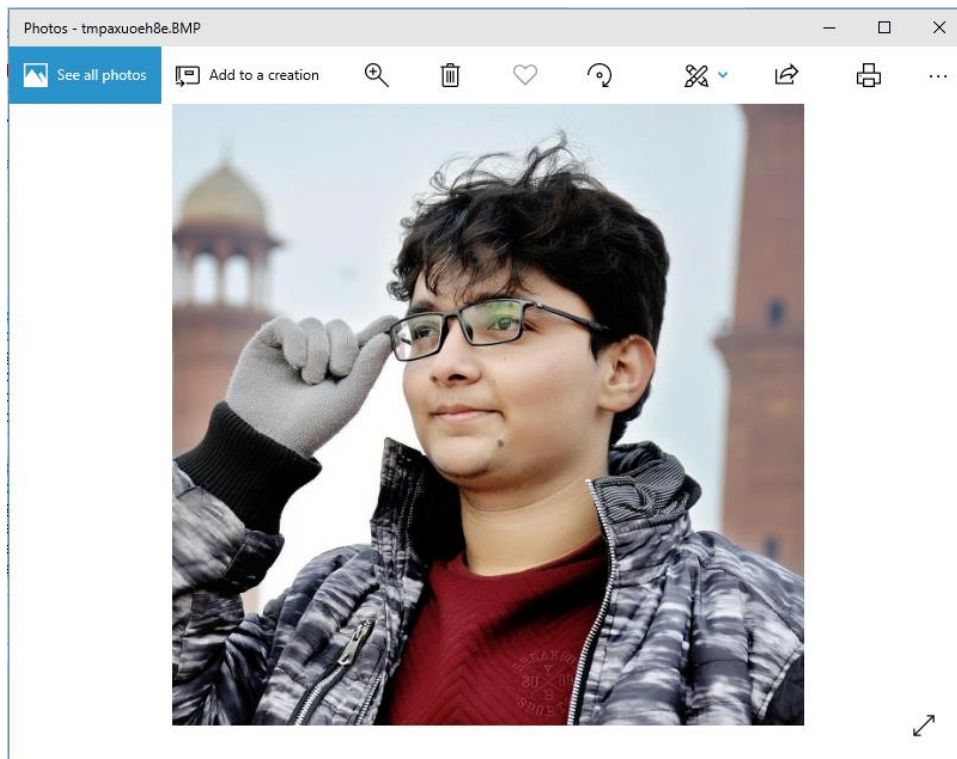
**Screenshot:**



**Task: 03c:**

```
import os, sys  
from PIL import Image, ImageFilter  
img = Image.open("1.jpg")  
sharp_img = img.filter(ImageFilter.SHARPEN)  
sharp_img.save("sharp_img.jpg")  
sharp_img.show()
```

**Screenshot:**



**Task: 03d:**

```
import PIL
from PIL import Image
import numpy as np
img = Image.open("1.jpg")
pixel = np.array(img)
red, green, blue = pixel[:, :, 0], pixel[:, :, 1], pixel[:, :, 2]
res = (red * 0.2126 + green * 0.7152 + blue * 0.0722)
grey = Image.fromarray(res)
grey.show()
```

**Screenshot:**

