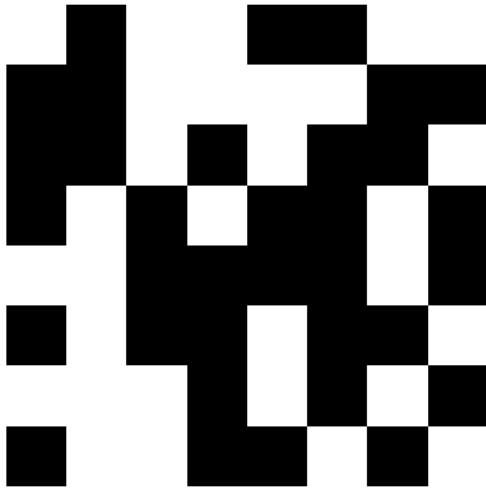


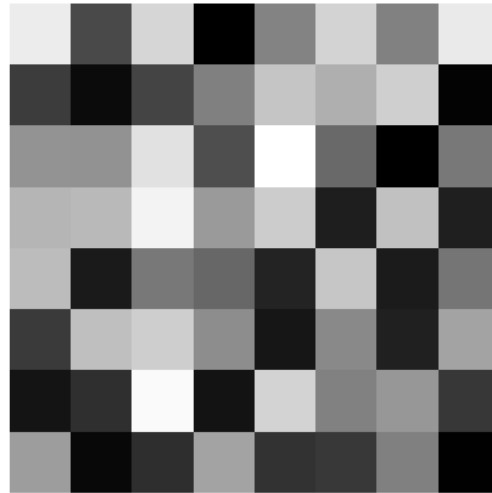
## EXERCISE-1

### COMPUTER VISION

```
plt.imshow(img1, cmap='gray')  
plt.axis('off')  
plt.show()
```



```
plt.imshow(img, cmap='gray')  
plt.axis('off')  
plt.show()
```



```
Aslam_image=image.open( 'Aslam.jpg' )  
Aslam_Image.size  
(1692, 2340)
```

```
plt.imshow(Aslam_Image)  
plt.axis('off')  
plt.show()
```

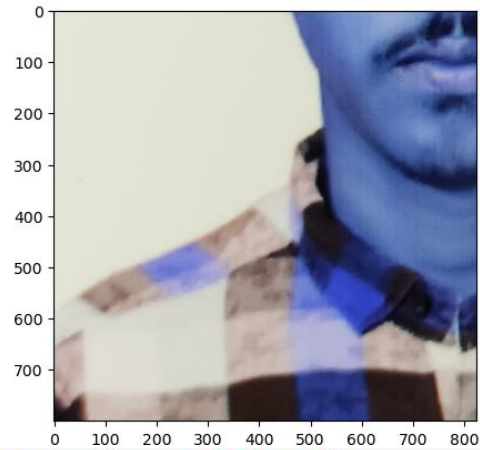


```
import cv2
```

```
image = cv2.imread('Aslam.jpg')  
image.shape  
(2340, 1692, 3)
```

```
crop=image[1000:1800,75:900]  
plt.imshow(crop)
```

<matplotlib.image.AxesImage at 0x1bf52172050>



```
i]: b,g,r = cv2.split(image)
```

```
i]: plt.imshow(b,cmap='Blues')  
plt.axis('off')  
plt.show()
```



```
plt.imshow(g,cmap='Greens')  
plt.axis('off')  
plt.show()
```



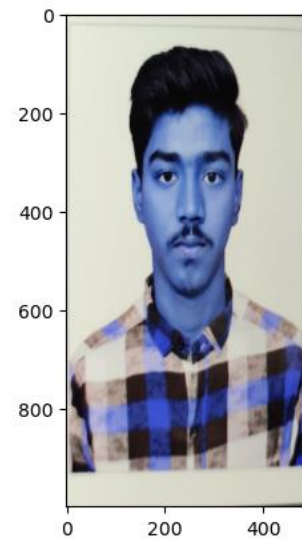
```
plt.imshow(g, cmap='Reds')  
plt.axis('off')  
plt.show()
```



```
resize=cv2.resize(image,(500,1000))
```

```
plt.imshow(resize)
```

```
<matplotlib.image.AxesImage at 0x1bf5522>
```



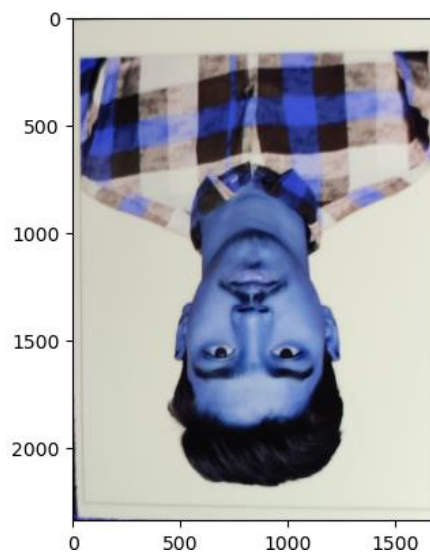
```
rotate=cv2.rotate(image,cv2.ROTATE_180)
```

```
: plt.imshow(cv2.flip(image,1))
```

```
plt.imshow(rotate)
```

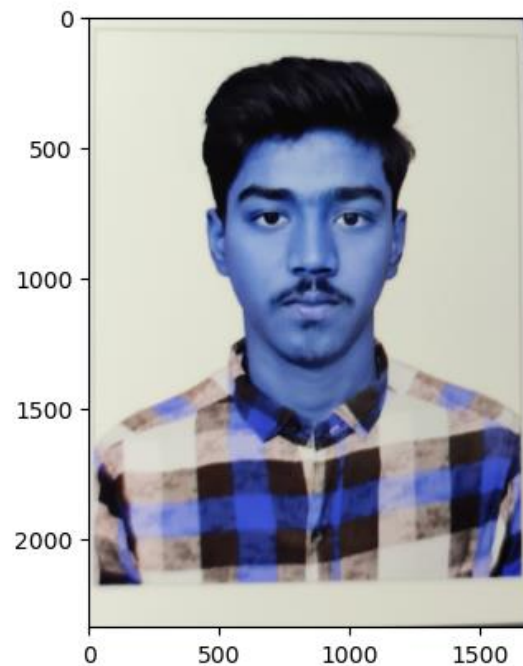
```
: <matplotlib.image.AxesImage at 0x1bf55276510>
```

```
<matplotlib.image.AxesImage at 0x1bf551b86d0>
```



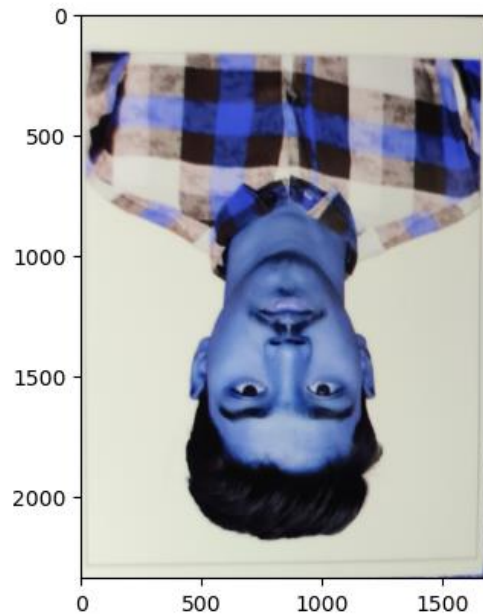
```
image = cv2.imread('Aslam.jpg')  
plt.imshow(image)
```

<matplotlib.image.AxesImage at 0x1bf552ee450>



```
plt.imshow(cv2.flip(image,0))
```

<matplotlib.image.AxesImage at 0x1bf55286450>



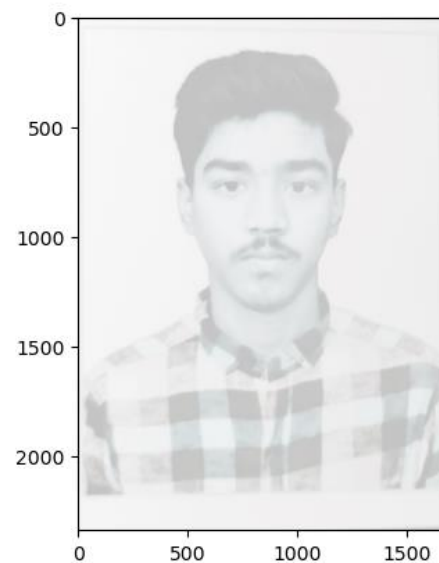
```
c = 1 - bgr_image_norm[:, :, 2]  
m = 1 - bgr_image_norm[:, :, 1]  
y = 1 - bgr_image_norm[:, :, 0]
```

```
c = (c * 100).astype(np.uint8)  
m = (m * 100).astype(np.uint8)  
y = (y * 100).astype(np.uint8)  
k = np.min([c, m, y], axis=0)
```

```
cmy_image = cv2.merge([c, m, y, k])
```

```
plt.imshow(cmy_image)
```

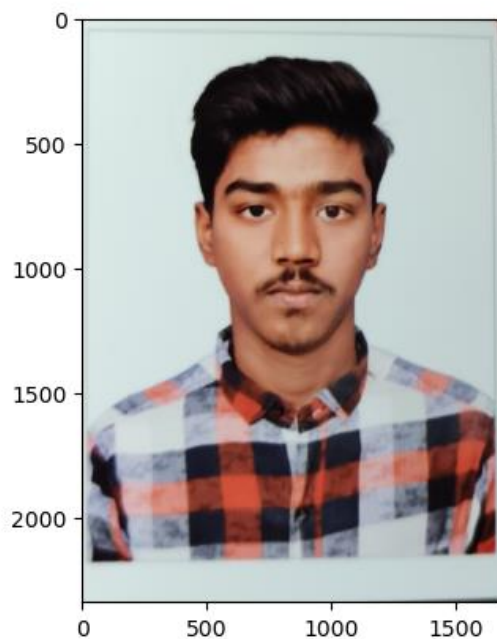
<matplotlib.image.AxesImage at 0x1bf553f9bd0>



```
rgb_image = cv2.cvtColor(image, cv2.COLOR_BGR2RGB)
```

```
plt.imshow(rgb_image)
```

<matplotlib.image.AxesImage at 0x1bf5539a490>





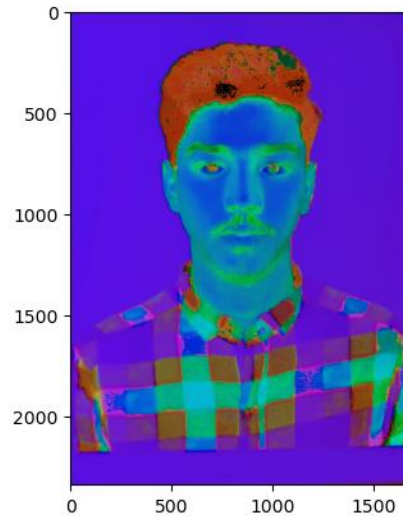
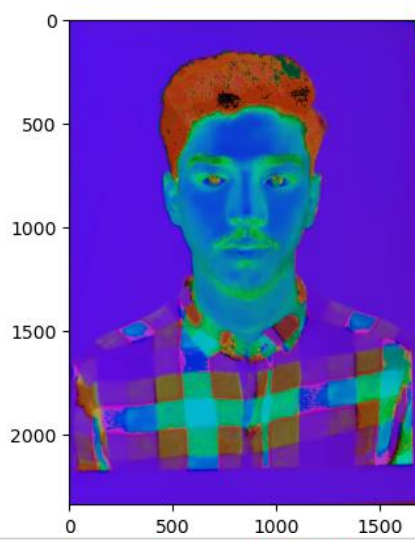
```
hsv_image = cv2.cvtColor(image,cv2.COLOR_BGR2HSV)
```

```
plt.imshow(hsv_image)
```

```
<matplotlib.image.AxesImage at 0x1bf552d5c90>
```

```
: plt.imshow(cv2.cvtColor(rgb_image,cv2.COLOR_RGB2HSV))
```

```
: <matplotlib.image.AxesImage at 0x1bf555c5c90>
```



```
image=Image.open('Aslam.jpg')
```

```
plt.imshow(image.convert('CMYK'))
```

```
<matplotlib.image.AxesImage at 0x1bf520cdc90>
```

