• PROGRAM 1:

```
print('welcome')
for i in range (10):
    print(i)
print ('end of program')
```

OUTPUT:

PROGRAM 2:

Program 2A:

```
import cv2

xyz=cv2.imread('bike.jpeg',1)

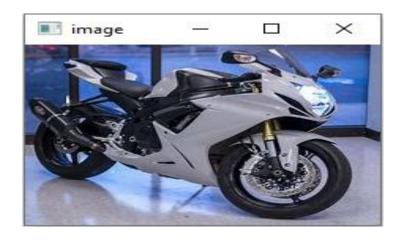
cv2.imshow('image',xyz)

print('size of the image',xyz.size)

print('shape of the image',xyz.shape)
```

OUTPUT 1:

```
size of the image 121500
shape of the image (180, 225, 3)
```



Program 2B:

```
import cv2
```

xyz=cv2.imread('bike.jpeg',1)

xyzr=cv2.imread('bike.jpeg',0)

cv2.imshow('image',xyz)

cv2.imshow('image',xyzr)

print('size of the image',xyz.size)

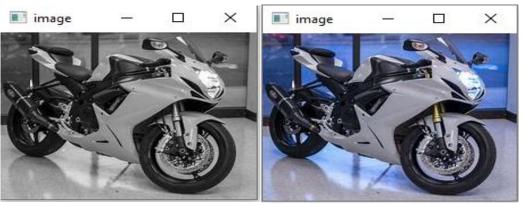
print('size of the grey image',xyzr.size)

print('shape of the image',xyz.shape)

print('shape of the grey image',xyzr.shape)

OUTPUT 2:

```
size of the image 121500
size of the grey image 40500
shape of the image (180, 225, 3)
shape of the grey image (180, 225)
```



PROGRAM 3:

```
import cv2
xyz=cv2.imread('bike.jpeg',1)
cv2.imshow('image',xyz)
print('size of the image',xyz.size)
print('shape of the image',xyz.shape)
cv2.waitKey()
cv2.destroyAllWindows
print(" \n brightness of image:",xyz[100,100,1])
p=xyz[100,100]
print(' \n display 100 th pixel intensity:',p)
a=xyz[0:100,0:100]
cv2.imshow('crop image',a)
b = xyz[5,5,2]
print('\n one pixel intensity:',b)
print('\n display first five rows and columns of image: ')
print(xyz[0:5,0:5,1])
```

OUTPUT:

```
size of the image 121500
shape of the image (180, 225, 3)

brightness of image: 147

display 100 th pixel intensity: [161 147 148]

one pixel intensity: 60

display first five rows and columns of image:
[[74 80 90 84 63]
[73 79 90 89 73]
[71 76 86 91 84]
[63 66 72 77 76]
[63 67 70 72 68]]
```

