

# FCV WEEK1 SUBMISSION

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***1. Write a simple program to read, display, and write an image.***

Code:-

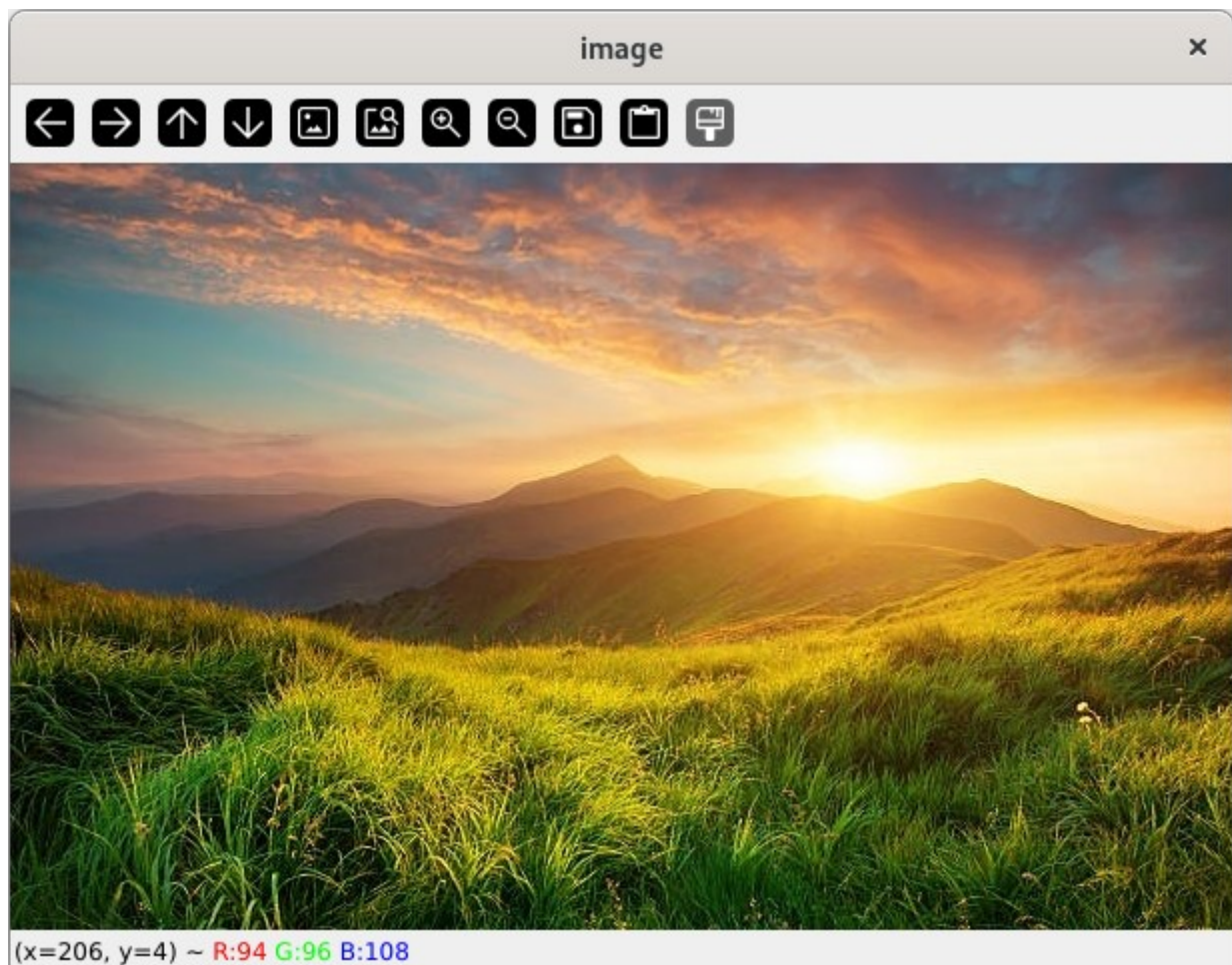
```
import cv2 as cv

img = cv.imread('img.jpg')
cv.imshow('image', img)

cv.waitKey(0)
# Writing same image
cv.imwrite('img.jpg', img)

cv.destroyAllWindows()
```

Output:-



## 2. Write a simple program to read and display a video file.

Code:-

```
import cv2 as cv

VideoCapture = cv.VideoCapture('video.mp4')

while True:
    ret, frame = VideoCapture.read()

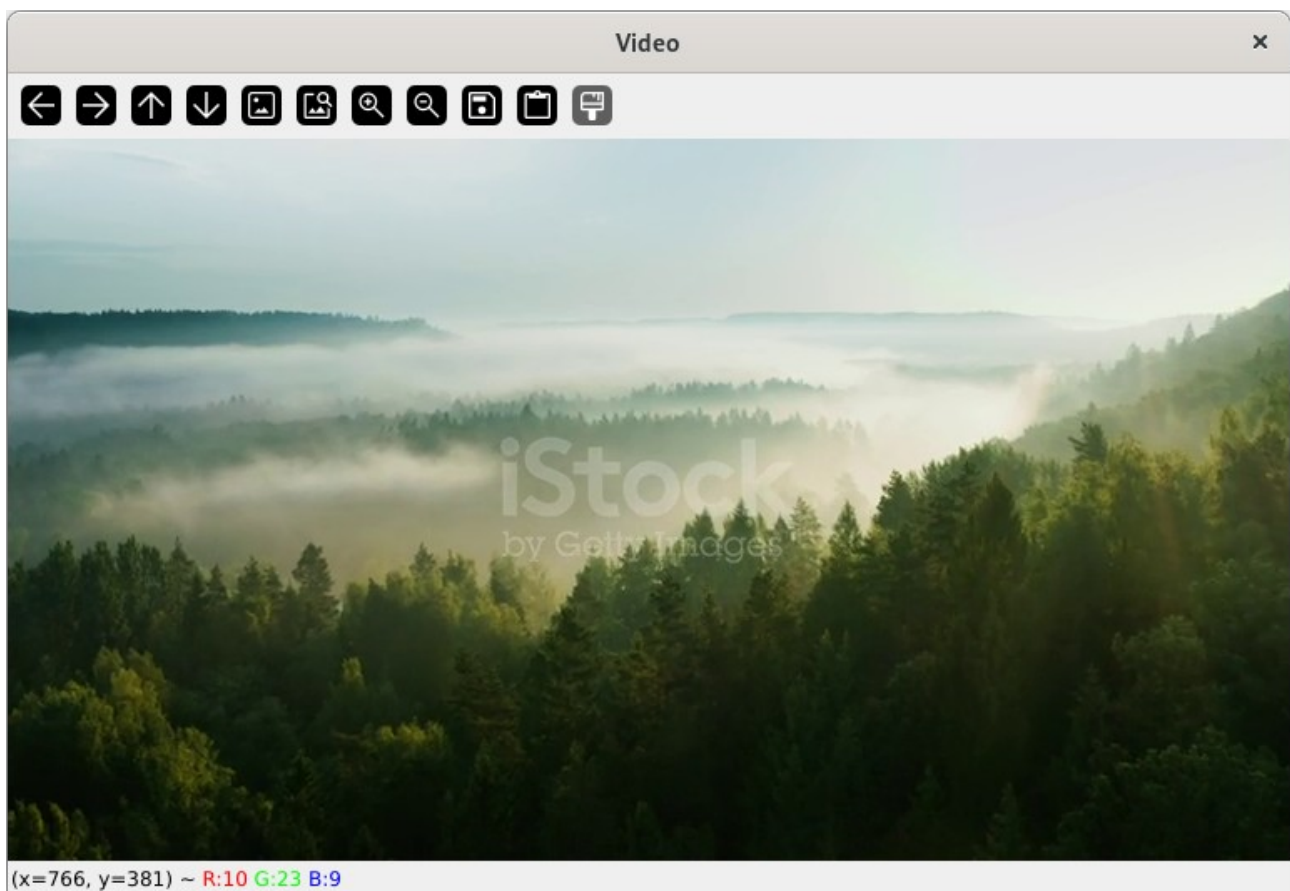
    if not ret:
        break

    cv.imshow('Video', frame)

    if cv.waitKey(1) & 0xFF == ord('k'):
        break

VideoCapture.release()
cv.destroyAllWindows()
```

Output:-



### 3. Write a simple program to Extracting the RGB values of a pixel.

Code:-

```
import cv2 as cv

# Load Image
img = cv.imread('img.jpg')

print(f'R: {img[0][0][2]} G: {img[0][0][1]} B: {img[0][0][0]}')
```

Output:-

```
(myenv) cv1-aiml-b2@dsl-21:~/230962326/Week1$ python3 q3.py
R: 108 G: 85 B: 79
(myenv) cv1-aiml-b2@dsl-21:~/230962326/Week1$
```

### 4. Write a simple program to draw rectangle.

Code:-

```
import cv2 as cv
import numpy as np

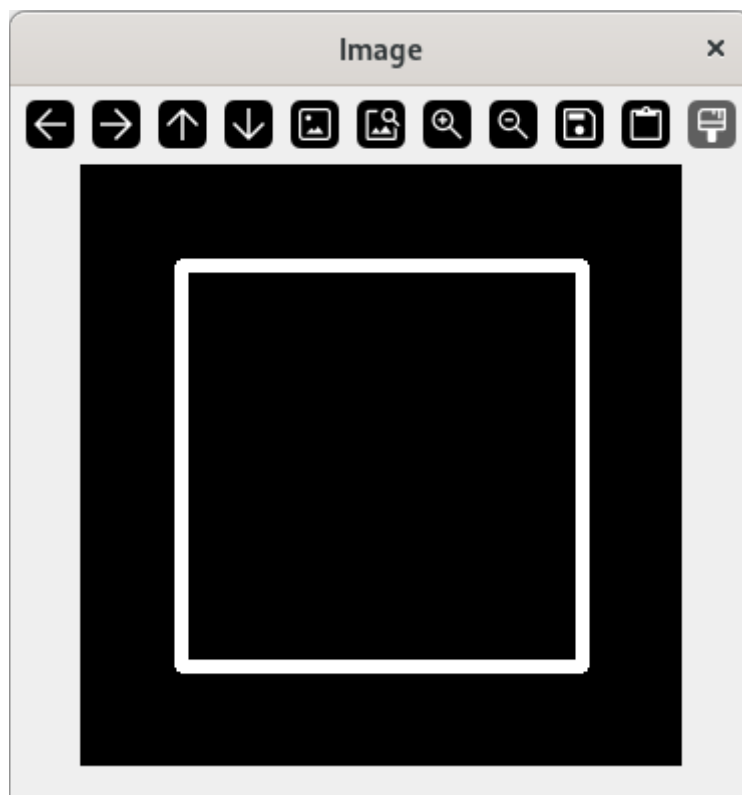
plain_img = np.zeros((300,300,3))

rect_img = cv.rectangle(plain_img, (50,50), (250,250), (255,255,255), 5)

cv.imshow("Image", rect_img)
cv.waitKey(0)

cv.destroyAllWindows()
```

Output:-



### **5. Write a simple program to Resizing the Image.**

Code:-

```
import cv2 as cv

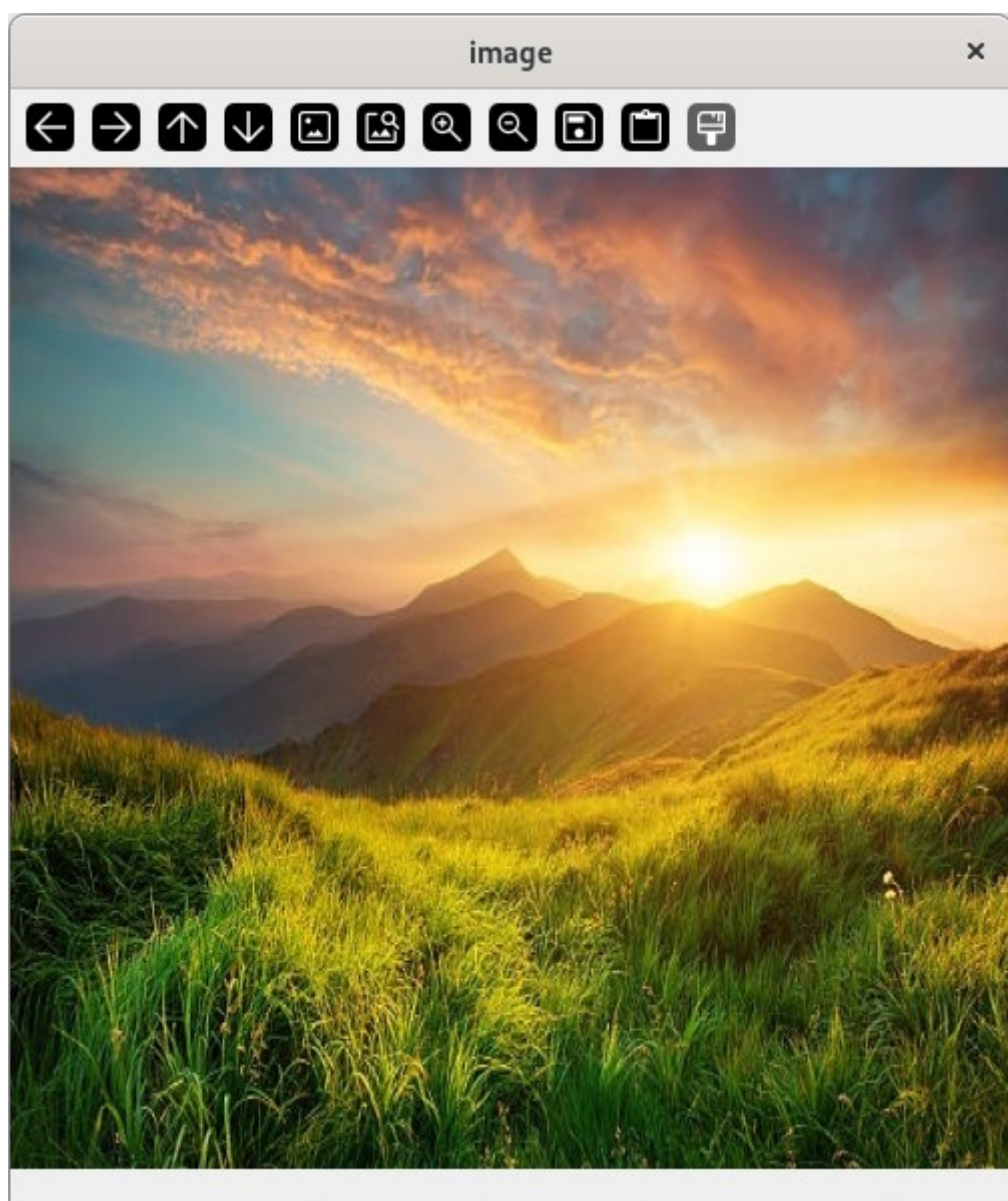
img = cv.imread('img.jpg')

resized_img = cv.resize(img, (500, 500), interpolation=cv.INTER_AREA)
cv.imshow('image', resized_img)

cv.waitKey(0)

cv.destroyAllWindows()
```

Output:-





## 6. Write a simple program to Rotating the Image.

Code:-

```
import cv2 as cv

img = cv.imread('img.jpg')
img = cv.rotate(img, cv.ROTATE_90_CLOCKWISE)

cv.imshow('image', img)

cv.waitKey(0)
cv.destroyAllWindows()
```

Output:-

