Name: Yaseen Islam

Code: 60

My code :

```
import numpy as np
import cv2

img = cv2.imread('C:\\Users\\yi340\\Downloads\\shape_detection.png')
GR=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)

thresh,imbin = cv2.threshold(GR,127,255,cv2.THRESH_BINARY)

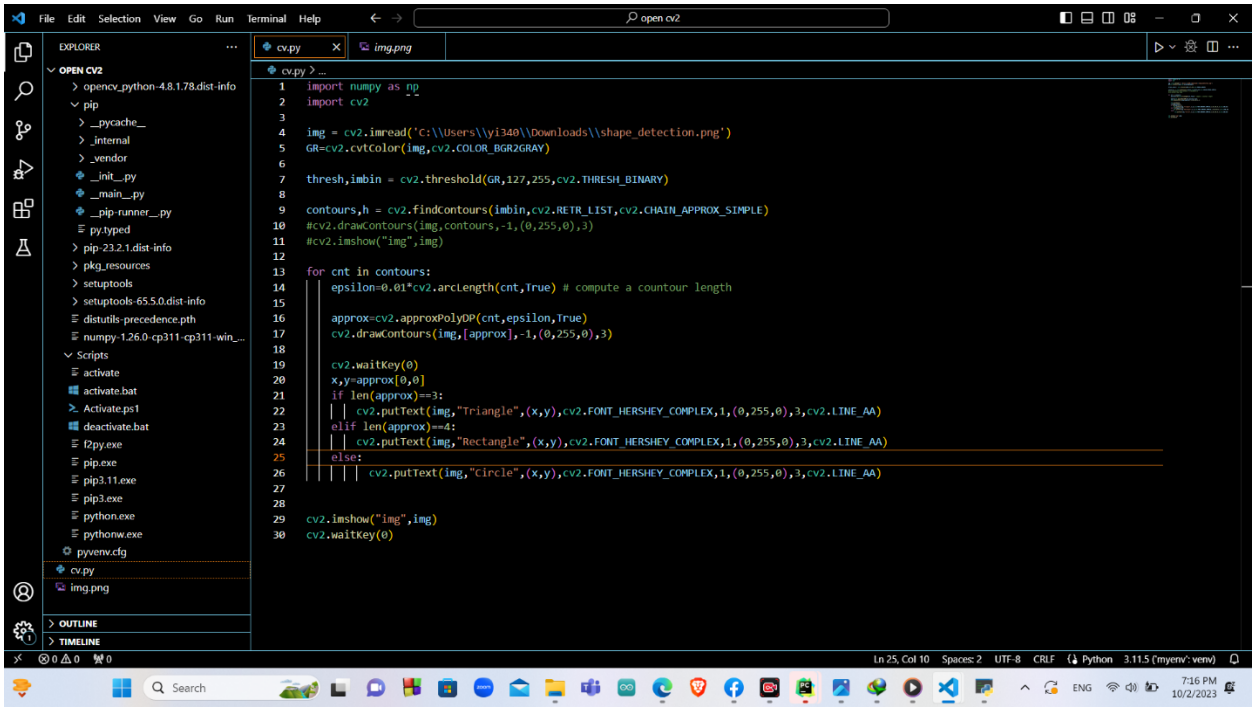
contours,h = cv2.findContours(imbin,cv2.RETR_LIST,cv2.CHAIN_APPROX_SIMPLE)
#cv2.drawContours(img,contours,-1,(0,255,0),3)
#cv2.imshow("img",img)

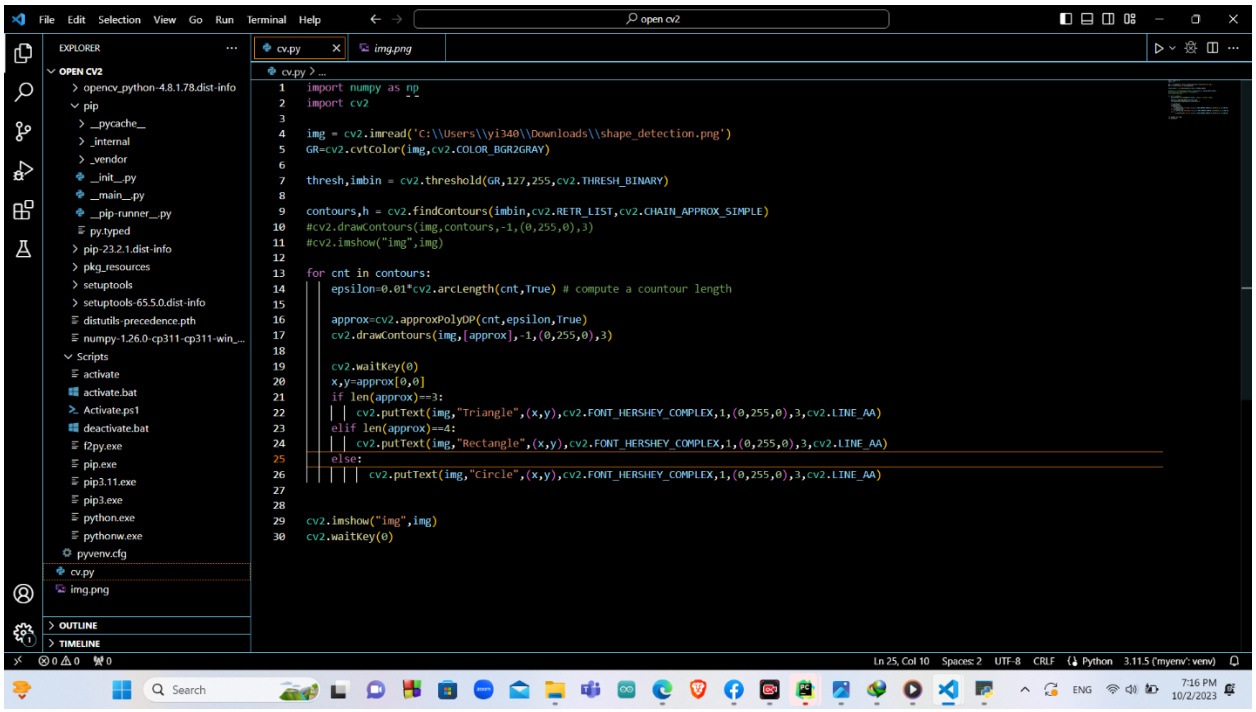
for cnt in contours:
    epsilon=0.01*cv2.arcLength(cnt,True) # compute a countour length

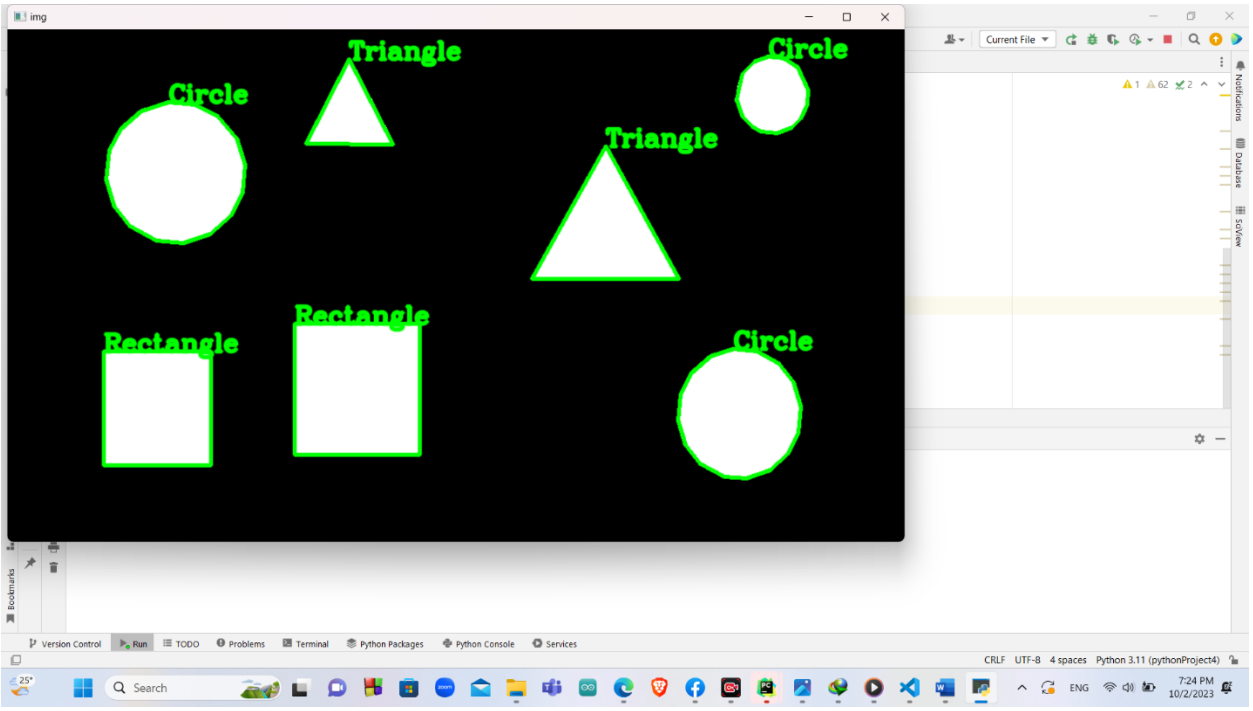
    approx=cv2.approxPolyDP(cnt,epsilon,True)
    cv2.drawContours(img,[approx],-1,(0,255,0),3)

    cv2.waitKey(0)
    x,y=approx[0,0]
    if len(approx)==3:
        cv2.putText(img,"Triangle",(x,y),cv2.FONT_HERSHEY_COMPLEX,1,(0,255,0),3,c
v2.LINE_AA)
    elif len(approx)==4:
        cv2.putText(img,"Rectangle",(x,y),cv2.FONT_HERSHEY_COMPLEX,1,(0,255,0),3,
cv2.LINE_AA)
    else:
          cv2.putText(img,"Circle",(x,y),cv2.FONT_HERSHEY_COMPLEX,1,(0,255,0),3,c
v2.LINE_AA)
```

```
cv2.imshow("img",img)
cv2.waitKey(0)
```





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cv2.imshow("img",img)
cv2.waitKey(0)
```

Task 2

```
import cv2
import numpy as np

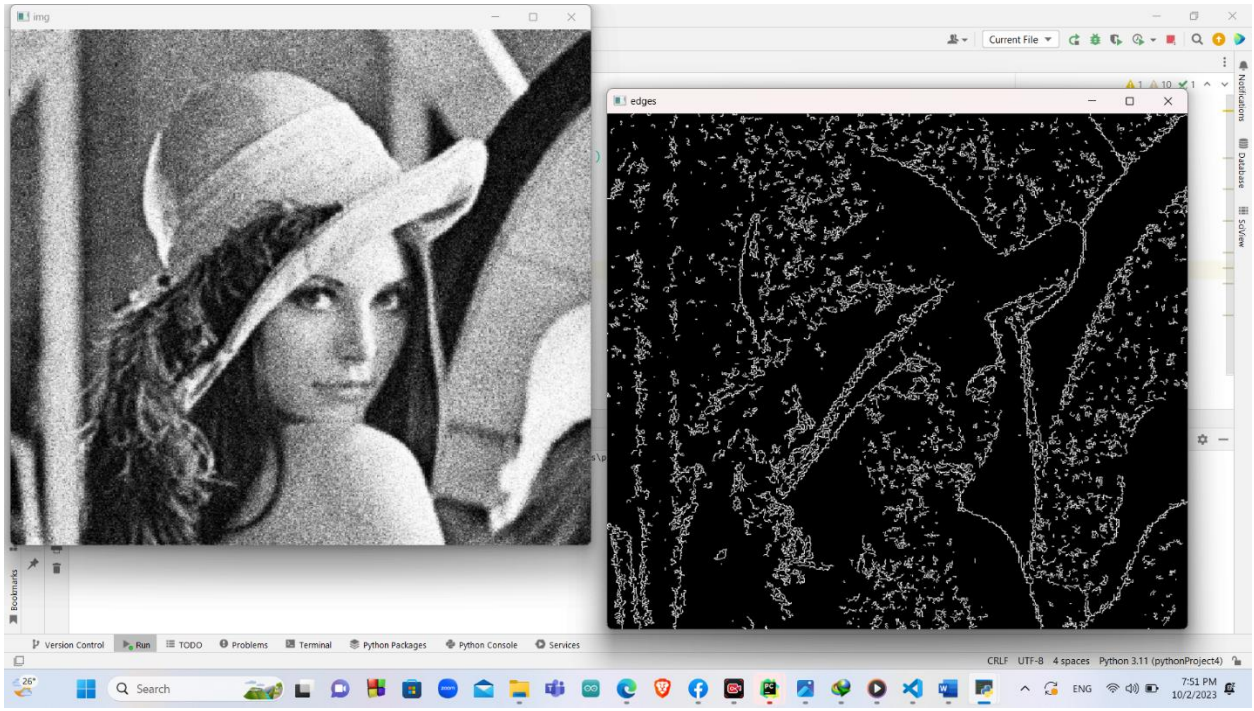

img=cv2.imread("C:\\Users\\yi340\\Downloads\\increase_quality.png")

img=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)

img=cv2.equalizeHist(img)

detc_1=cv2.Canny(image=img,threshold1=200,threshold2=500)
cv2.imshow("img",img)
cv2.imshow("edges",detc_1)

cv2.waitKey(0)
```




```python
import cv2
import numpy as np


img=cv2.imread("C:\\Users\\yi340\\Downloads\\increase_quality.png")

img=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)

img=cv2.equalizeHist(img)

detc_1=cv2.Canny(image=img,threshold1=200,threshold2=500)
cv2.imshow("img",img)
cv2.imshow("edges",detc_1)

cv2.waitKey(0)
```

```
C:\Users\yi340\PycharmProjects\pythonProject4\venv\Scripts\python.exe C:\Users\yi340\PycharmProjects\pythonProject4\dddd.py
```