

شماره فصل: ۵	تعداد جلسات مورد نیاز: ۱ جلسه
اهداف:	
- آشنایی با نوشتن متن و رسم خط و اشکال هندسی بر روی تصویر	

```
## Insert text and draw line and shapes on image##
import cv2
import numpy as np
#Creating a blank matrix (black image) with a desire size
img = np.zeros((600, 900, 3), dtype=np.uint8) #np.zeros((height (y), width
(x), number of channels), data type)
#Draw rectangle
cv2.rectangle(img, (0,0),(900,500),(255,225,85), -1) #cv2.rectangle(name of
image, (width-up (x1),height-up(y1)),(width-down (x2),height-down (y2)), (B
value,G value,R value), thickness in pixel (for entire fill insert -1))
cv2.rectangle(img, (0,500),(900,600),(75,180,70), -1)
cv2.rectangle(img, (0,0),(900,600),(0,0,0), 5)
#Draw circle
cv2.circle(img, (200,150), 60, (0,255,255), -1) #cv2.circle(name of image,
(center-width(x),center-height(y)), radius in pixel, (B value,G value,R
value), thickness in pixel (for entire fill insert -1))
cv2.circle(img, (200,150), 75, (220,255,255), 10)
#Draw line
cv2.line(img, (710, 500), (710, 420), (30,65,155), 15) #cv2.line(name of
image, (begining-width(x1),begining-height(y1)), (end-width(x2),end-
height(y2)), (B value,G value,R value), thickness in pixel)
cv2.line(img, (600, 500), (600, 420), (30,65,155), 25)
#Draw polygon (triangle)
triangle = np.array([[640,460],[780,460], [710,200]], dtype=np.int32)
cv2.fillPoly(img, [triangle], (75,180,70)) #Fill the polygon:
cv2.fillPoly(name of image, [name of polygon variable], (B value,G value,R
value))
triangle2 = np.array([[500,440],[700,440], [600,75]], dtype=np.int32)
cv2.fillPoly(img, [triangle2], (75,200,70))
#Insert text
font = cv2.FONT_HERSHEY_SCRIPT_SIMPLEX #Define font type
cv2.putText(img, "Image processing is sweet!", (20,490), font, 1.5,
(255,255,255), 2) #cv2.putText(name of image, "Text", (width (x)
position,height position (y)), font type variable, font size in pixle, (B
value,G value,R value), thickness in pixel)

cv2.imshow("My image", img)
cv2.waitKey(0)
cv2.destroyAllWindows()
####
```