```
In [6]: img
```

```
Out[6]: array([[[0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0],
                 ...,
                 [0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0]],

                [[0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0],
                 ...,
                 [0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0]],

                [[0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0],
                 ...,
                 [0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0]],

                ...,

                [[0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0],
                 ...,
                 [0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0]],

                [[0, 0, 0],
                 [0, 0, 0],
                 [0, 0, 0],
                 ...,
                 [0, 0, 0],
```

```
       [0, 0, 0],
       [0, 0, 0]],

      [[0, 0, 0],
       [0, 0, 0],
       [0, 0, 0],
       ...,
       [0, 0, 0],
       [0, 0, 0],
       [0, 0, 0]], dtype=uint8)
```

In [7]:
```python
cv2.imshow("img",img)
cv2.waitKey(3000)
cv2.destroyAllWindows()
```

In [36]:
```python
t1=cv2.warpAffine(img,t,img.shape[0:2])
```

In [18]:
```python
t=np.array([[1,0,500],[0,1,100]],dtype=np.float32)
```

In [53]:
```python
j=cv2.getRotationMatrix2D((img.shape[0]//2,img.shape[1]//2),90,0.5)
```

In [41]:
```python
ri=cv2.warpAffine(img,j,img.shape[0:2])
```

In [49]:
```python
img6=np.zeros((400,400,3),np.uint8)
```

In [57]:
```python
cv2.imshow("d",img6)
cv2.waitKey()
cv2.destroyAllWindows()
```

```
In [50]: y2=cv2.circle(img6,(200,105),10,(0,255,0),-1)
         y2=cv2.circle(img6,(200,125),10,(0,0,225),1)
         i3=cv2.line(img6,(200,145),(200,205),(255,0,0),5)
         i3=cv2.line(img6,(300,205),(200,205),(255,255,255),5)
         i3=cv2.line(img6,(300,215),(200,215),(255,255,255),5)
         i3=cv2.line(img6,(300,225),(200,225),(255,255,255),5)
         i3=cv2.line(img6,(300,235),(200,235),(255,255,255),5)
         i3=cv2.line(img6,(300,245),(200,245),(255,255,255),5)
         i3=cv2.line(img6,(300,255),(200,255),(255,255,255),5)
         i3=cv2.line(img6,(300,265),(200,265),(255,255,255),5)
         i3=cv2.line(img6,(300,275),(200,275),(255,255,255),5)
         i3=cv2.line(img6,(300,285),(200,285),(255,255,255),5)
         i3=cv2.line(img6,(300,295),(200,295),(255,255,255),5)
         i3=cv2.line(img6,(300,305),(200,305),(255,255,255),5)
         i3=cv2.line(img5,(300,315),(200,315),(255,255,255),5)
         i3=cv2.line(img6,(300,325),(200,325),(255,255,255),5)
         i3=cv2.line(img6,(300,335),(200,335),(255,255,255),5)
         i3=cv2.line(img6,(300,345),(200,345),(255,255,255),5)
         i3=cv2.line(img6,(300,355),(200,355),(255,255,255),5)
         i3=cv2.line(img6,(300,365),(200,365),(255,255,255),5)
         i3=cv2.line(img6,(300,375),(200,375),(255,255,255),5)
         i3=cv2.line(img6,(300,385),(200,385),(255,255,255),5)
         i3=cv2.line(img6,(300,395),(200,395),(255,255,255),5)

         xt=cv2.rectangle(img6,(150,300),(200,200),(0,255,255),-1)
         xt=cv2.rectangle(img6,(100,300),(250,250),(255,0,255),-1)
         y2=cv2.circle(img6,(150,300),20,(225,225,0),-1)
         y2=cv2.circle(img6,(200,300),20,(225,225,0),-1)
```

```
In [53]: cv2.imwrite(r"C:\Users\range\OneDrive\Pictures\tz6.jpg",img6)
```

```
Out[53]: True
```

In [33]:
```python
def draw(event,x,y,flag,param):
    if event==cv2.EVENT_FLAG_RBUTTON:
        cv2.circle(img4,(x,y),5,(125,125,125),5)
```

In [34]:
```python
cv2.namedWindow("k")
cv2.setMouseCallback("k",draw)

while True:
    cv2.imshow("k",img4)
    if cv2.waitKey(1) & 255 == ord("r"):
        break
cv2.destroyAllWindows()
```

In [59]:
```python
count=1
while True:
    imgf=cv2.imread(r"C:\Users\range\OneDrive\Pictures\tz{}.jpg".format(count))
    cv2.imshow("gif",imgf)
    if cv2.waitKey(100) & 255== ord("r"):
        break
    count=count+1
    if count==7:
        count=1
cv2.destroyAllWindows()
```

```python
In [ ]: img7=np.zeros((400,400,3),np.uint8)

y2=cv2.circle(img7,(200,105),10,(0,255,0),-1)
y2=cv2.circle(img7,(200,125),10,(0,0,225),1)
i3=cv2.line(img7,(200,145),(200,205),(255,0,0),5)
i3=cv2.line(img7,(300,205),(200,205),(255,255,255),5)
i3=cv2.line(img7,(300,215),(200,215),(255,255,255),5)
i3=cv2.line(img7,(300,225),(200,225),(255,255,255),5)
i3=cv2.line(img7,(300,235),(200,235),(255,255,255),5)
i3=cv2.line(img7,(300,245),(200,245),(255,255,255),5)
i3=cv2.line(img7,(300,255),(200,255),(255,255,255),5)
i3=cv2.line(img7,(300,265),(200,265),(255,255,255),5)
i3=cv2.line(img7,(300,275),(200,275),(255,255,255),5)
i3=cv2.line(img7,(300,285),(200,285),(255,255,255),5)
i3=cv2.line(img7,(300,295),(200,295),(255,255,255),5)
i3=cv2.line(img7,(300,305),(200,305),(255,255,255),5)
i3=cv2.line(img7,(300,315),(200,315),(255,255,255),5)
i3=cv2.line(img7,(300,325),(200,325),(255,255,255),5)
i3=cv2.line(img7,(300,335),(200,335),(255,255,255),5)
i3=cv2.line(img7,(300,345),(200,345),(255,255,255),5)
i3=cv2.line(img7,(300,355),(200,355),(255,255,255),5)
i3=cv2.line(img7,(300,365),(200,365),(255,255,255),5)
i3=cv2.line(img7,(300,375),(200,375),(255,255,255),5)
i3=cv2.line(img7,(300,385),(200,385),(255,255,255),5)
i3=cv2.line(img7,(300,395),(200,395),(255,255,255),5)

xt=cv2.rectangle(img7,(150,300),(250,200),(0,255,255),-1)
xt=cv2.rectangle(img7,(0,300),(250,250),(255,0,255),-1)
y2=cv2.circle(img7,(150,300),20,(225,225,0),-1)
y2=cv2.circle(img7,(200,300),20,(225,225,0),-1)
```