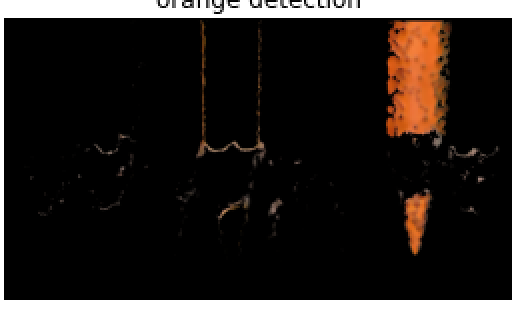
In [2]:
```python
import cv2
import numpy as np
import matplotlib.pyplot as plt
from Image import my_image,Show,segmentation
from skimage import color
```

$\textbf{I. ColorSegmentator(image, min_color, max_color)}$

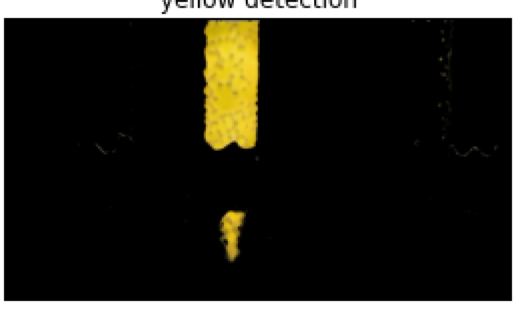
In [3]:
```python
pen = my_image.readimage('images/color2.jpg')
pen = cv2.medianBlur(pen, ksize=11)

result1_redpink=segmentation.ColorSegmentator(pen,120,179)
result1_blue=segmentation.ColorSegmentator(pen,85,120)
result1_yellow=segmentation.ColorSegmentator(pen,22,35)
result1_orange=segmentation.ColorSegmentator(pen,8,17)
result1_green=segmentation.ColorSegmentator(pen,36,80)

Show.compareim(result1_orange,pen,'orange detection','original')
Show.compareim(result1_yellow,result1_redpink,'yellow detection', 'red  & pink detection')
Show.compareim(result1_blue,result1_green,'blue detection','green detection')
```

orange detection

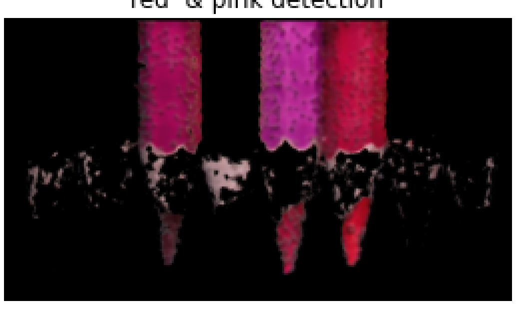


original

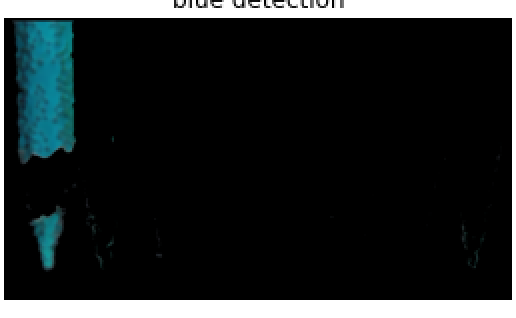
yellow detection



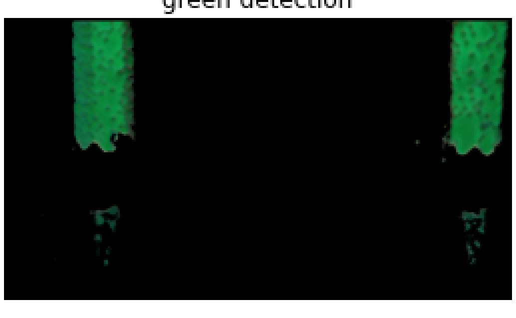
red & pink detection



blue detection

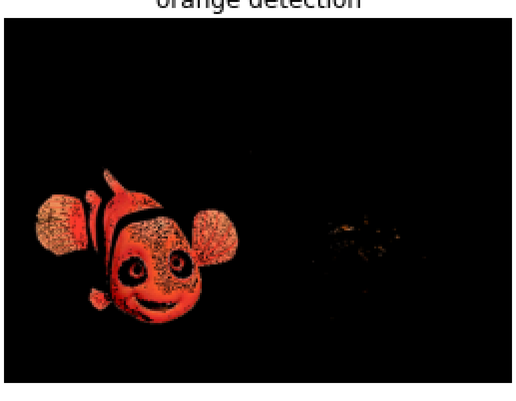


green detection

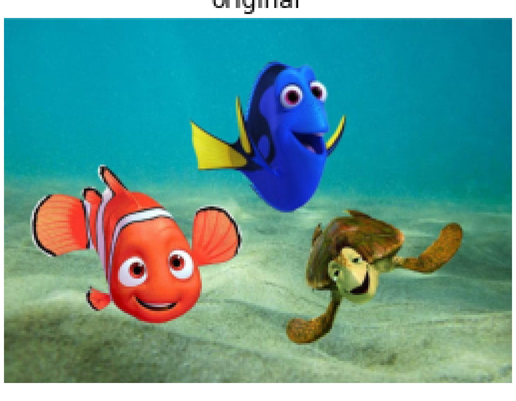


In [4]:
```python
nemo = my_image.readimage('images/color1.jpg')

result1_redpink=segmentation.ColorSegmentator(nemo,119,179)
result1_blue=segmentation.ColorSegmentator(nemo,85,120)
result1_yellow=segmentation.ColorSegmentator(nemo,22,35)
result1_orange=segmentation.ColorSegmentator(nemo,0,13)
result1_green=segmentation.ColorSegmentator(nemo,36,80)

Show.compareim(result1_orange,nemo,'orange detection','original')
Show.compareim(result1_redpink,result1_yellow,'red detection','yellow detection')
Show.compareim(result1_blue,result1_green,'blue detection','green detection')
```

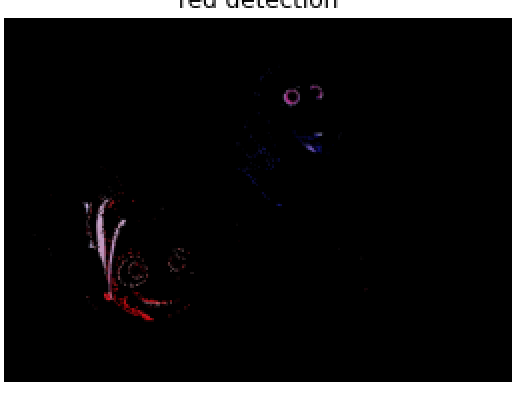
orange detection



original

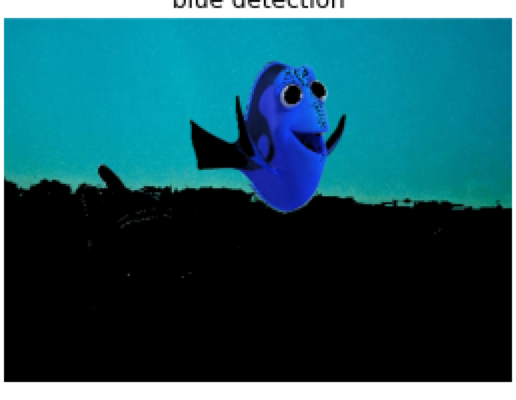


red detection

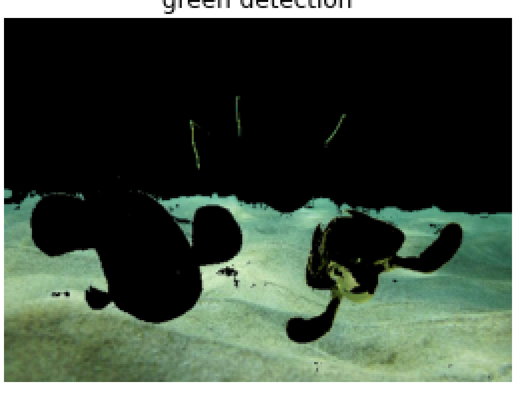


yellow detection

blue detection

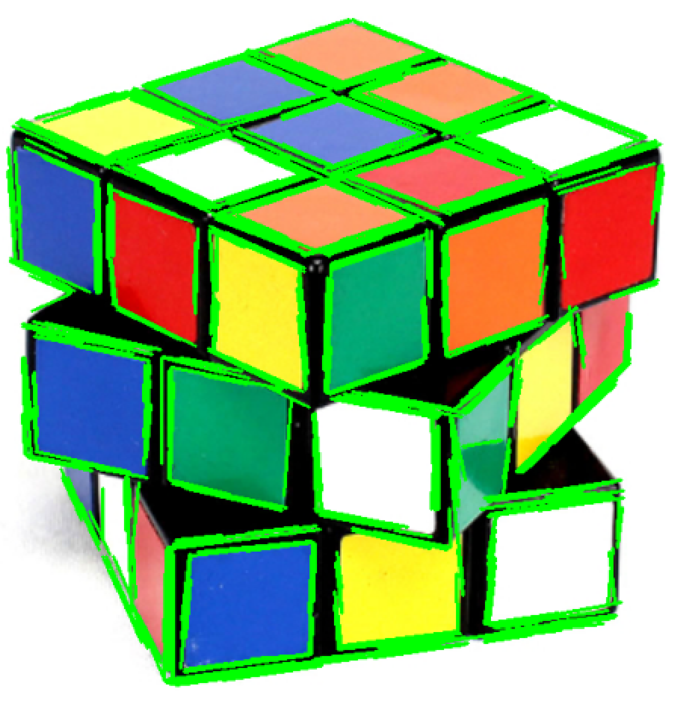


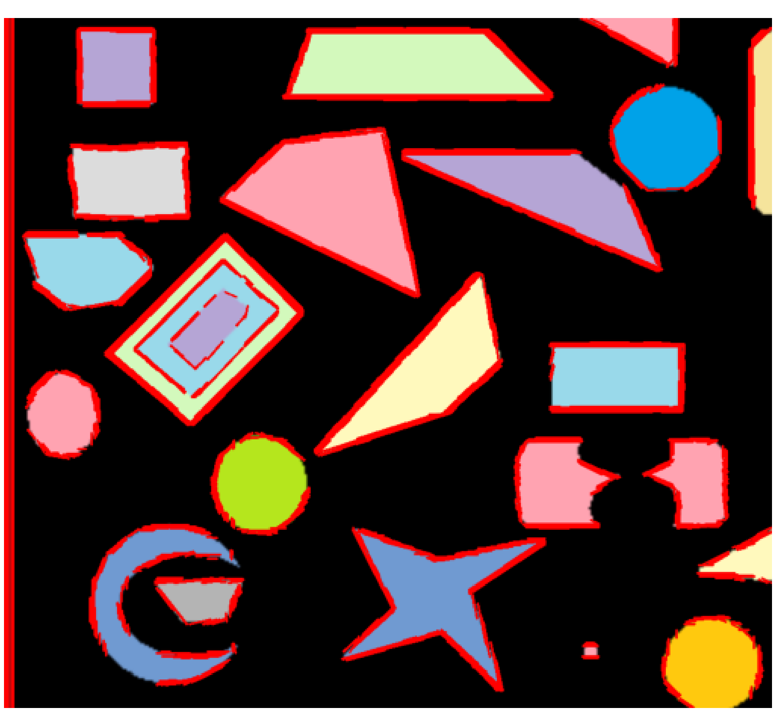
green detection



$\textbf{II. LinesDetector(image, minlenght)}$

In [5]:
```python
img1=my_image.readimage('images/edgedetection/test1.png')
img2=my_image.readimage('images/test5.png')
img3=my_image.readimage('images/test8.png')
img4=my_image.readimage('images/t3.png')



line1=segmentation.LinesDetector(img1,minlenght=30,r=0,g=255,b=0)
line2=segmentation.LinesDetector(img2,minlenght=30,r=0,g=0,b=255)
line3=segmentation.LinesDetector(img3,minlenght=30)
line4=segmentation.LinesDetector(img4,minlenght=10)

Show.compareim(line1,line2,'','',2)
Show.compareim(line3,line4,'','',2)
```



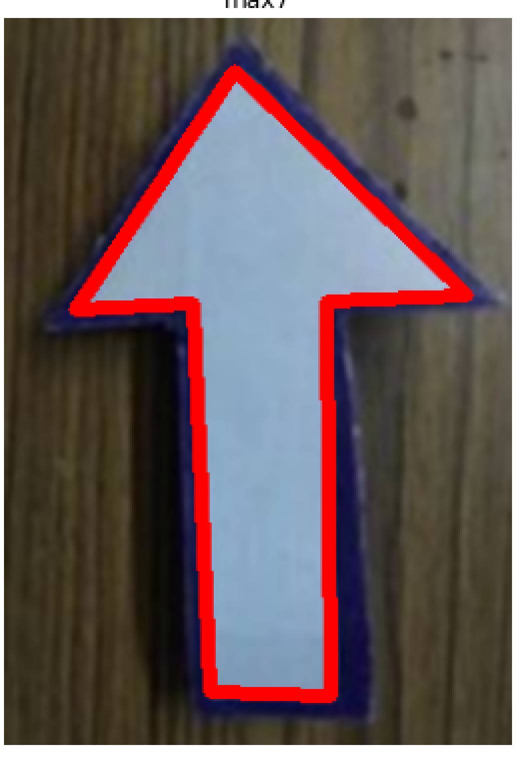


$\textbf{III. PolygonDetector(image, maxside)}$

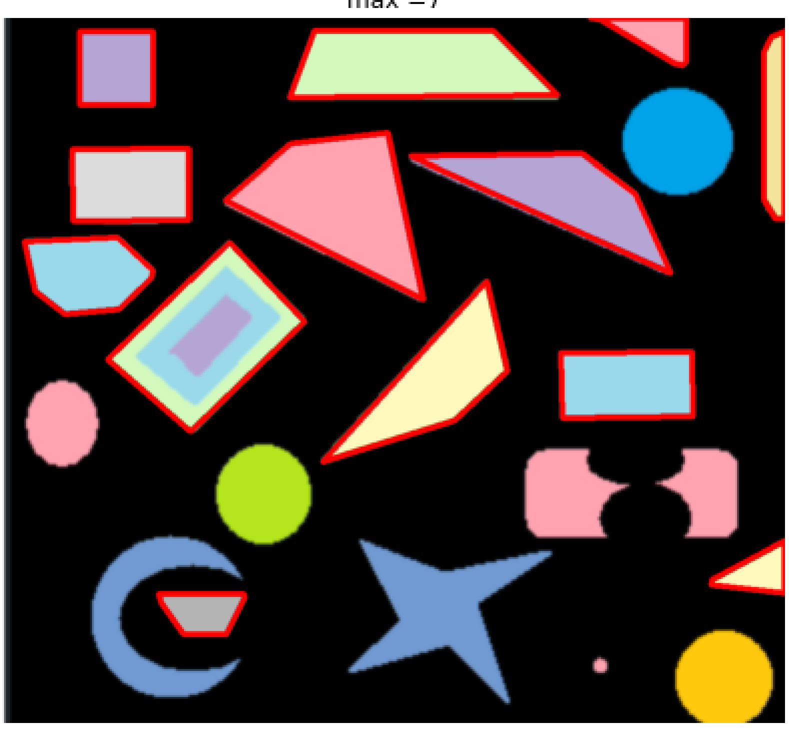
In [6]:
```python
img1=cv2.imread('images/edgedetection/test1.png')
img2=cv2.imread('images/t4.jpg')
img4=cv2.imread('images/t3.png')

s1=segmentation.PolygonDetector(img1,6,r=0,g=255,b=0)
s2=segmentation.PolygonDetector(img2,7)
s4=segmentation.PolygonDetector(img4,7)

s1 = cv2.cvtColor(s1, cv2.COLOR_BGR2RGB)
s2 = cv2.cvtColor(s2, cv2.COLOR_BGR2RGB)
s4 = cv2.cvtColor(s4, cv2.COLOR_BGR2RGB)
Show.compareim(s1,s2,'max=6','max7',1)
Show.show_me(s4,'max =7')
```

max=6

max7



max =7



$\star \star$

$\textbf{color segmentation with WEBCAM .}$

$ \text{exit with Esc}$

In [7]:
```python
segmentation.camera_color()
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: