Logic Operators
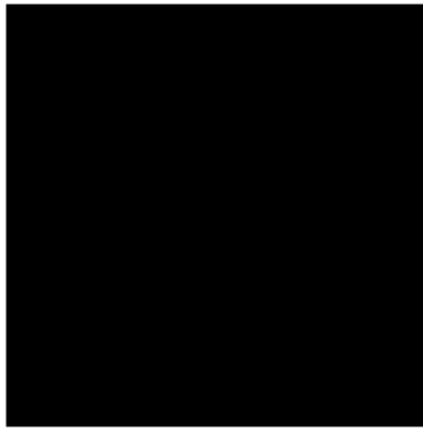
In [1]:
```python
#import libraries
import numpy as np
from PIL import Image
import matplotlib.pyplot as plt
```

In [2]:
```python
#read the image
# reading image and converting to gray scale
img = Image.open("../images/rectangle.png").convert('L')
# display image
img
```

Out[2]:

In [3]:
```python
img = img.resize((300,300), Image.Resampling.LANCZOS)
# convert to numpy array
numpy_image = np.array(img)
```

In [4]:
```python
#read the image
# reading image and converting to gray scale
img2 = Image.open("../images/triangle.png").convert('L')
# display image
img2
```
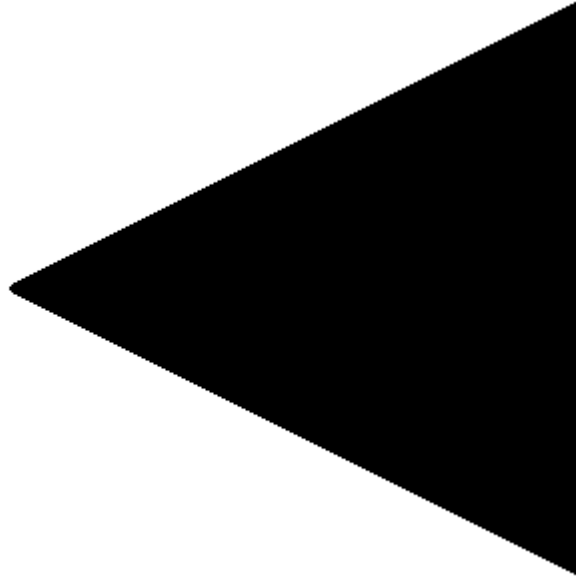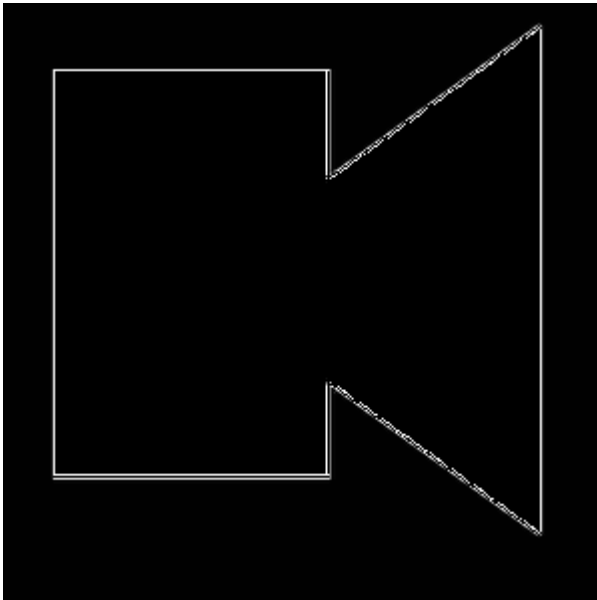
Out[4]:

In [5]:
```python
img2 = img2.resize((300,300), Image.Resampling.LANCZOS)
# convert to numpy array
numpy_image2 = np.array(img2)
```
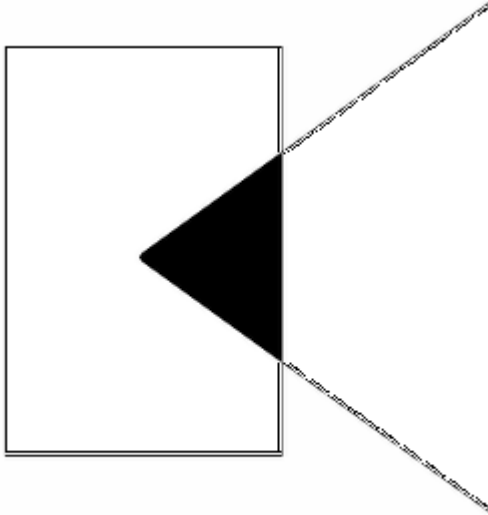
In [6]:
```python
# Logic AND
aa = numpy_image*numpy_image2
aa = Image.fromarray(aa)
aa = aa.convert("L")
aa
```

Out[6]:

In [7]:
```python
# Logic OR
aa = numpy_image+numpy_image2
aa = Image.fromarray(aa)
aa = aa.convert("L")
aa
```

Out[7]:

In [8]:
```python
#XOR
aa = np.logical_xor(numpy_image, numpy_image2)
aa = Image.fromarray(aa)
aa = aa.convert("L")
aa
```

Out[8]: