

3 question

```
import cv2
```

```
# Step 1: Load the image
```

```
image = cv2.imread(r'C:\Users\SAIL\Downloads\CV\waterfountain.jpg') # Replace with your image  
filename
```

```
# Step 2: Convert the image to grayscale
```

```
gray = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
```

```
# Step 3: Apply Gaussian Blur to reduce noise (optional but recommended)
```

```
blurred = cv2.GaussianBlur(gray, (5, 5), 0)
```

```
# Step 4: Apply Canny edge detection
```

```
edges = cv2.Canny(blurred, threshold1=100, threshold2=200)
```

```
# Step 5: Display the original and edge-detected image
```

```
cv2.imshow('Original Image', image)
```

```
cv2.imshow('Canny Edge Detection', edges)
```

```
cv2.waitKey(0)
```

```
cv2.destroyAllWindows()
```

