Libraries Needed

- Opencv

```
pip install opencv-python
```

- Tqdm

```
pip install tqdm
```

- Keyboard

```
pip install keyboard
```

Part1: Edge Detection(Sobel Filter)

- We need to press **Y** or **N** depending on if we need to do edge detection.
- Enter the **Image name** with the format.
- Enter **Filter size**: **3/5/7/9**
- Output Image will be saved with the name '**output_edge.jpg**'.
- Press any key on the output window to close and Move on.
- We can skip edge detection because it takes too much time and if we are running code more than once because we already have edge detected image saved.

Part 2: Hough Transform

- Enter the **Image name for Hough Transform** or use '**output_edge.jpg**' for the image produced using edge detection.
- Tracker 1: Image_Binarization_threshold (0 to 255)
- Tracker 2: Accumulator_threshold(0 to 255)
- Tracker 3: Angle_Quantization_steps (1 to 255)
- Press **P** to begin Hough Transform and **Q** to Quit.
- If you want to do Hough Transform again just close the 2 windows of images, configure controls, and Press **P**.

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