COMPUTER VISION LAB-II

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SYSTEM CONFIGURATION

- DISTRIB_ID = ManjaroLinux
- DISTRIB_RELEASE = 21.1.1
- RAM GB: 16

AIM

Perform various operations on images and get deeper understanding. The operations to perform are:

- Opening and closing of the image
- All morphological operation- dilation, erosion, hit and miss, tinning, skeletonization, thickening
- Perform edge detection operations on image using - Sobel, prewitt and robert detectors, Canny and LoG detectors.

FILE STRUCTURE

Consists of four folders:

- **ques1:** This folder consists of codes for Opening and Closing of Images.
- **ques2**: It consists of codes of Morphological Transformations (Dilation, Erosion, Hit & Miss, Tinning, Skeletonization, Thickening)
- **ques3:** Consists 6 files (Edge detection operations where I applied all the transformations in single file and other files where I performed operations individually)
- **images:**
  - Input Dataset: Two folders **MSRA-Images** and **lwf**.
  - **output_images:** Consists the outputs of the transformation I performed.

OPENING & CLOSING OF THE IMAGE

INPUT IMAGE

OUTPUT IMAGES

Opening Image	Closing Image

MORPHOLOGICAL OPERATIONS

INPUT IMAGE

OUTPUT IMAGES

Dilation	Erosion

Hit and Miss	Tinning

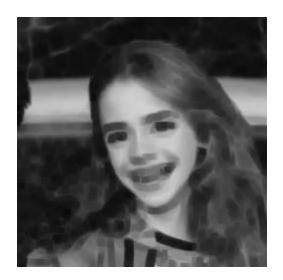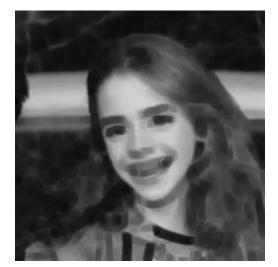**Skeletonization**   **Thickening**

EDGE DETECTION OPERATIONS

INPUT IMAGE

OUTPUT IMAGES

Sobel X   Sobel Y

Sobel XY

Prewitt X   **Prewitt Y**

Prewitt XY

Canny Edge Detection   **LoG detectors**

Robert Detectors