**Optical Character recognition (OCR)**

Methodology: To implement the optical character recognition we used OpenCV Libraries in Java.

* The Image is first being read from the path given by the user.
* Then we convert the RGB(Red,Green,Blue i.e colored) image into gray scale image.
* Then we converted the resulting gray scale image into binary image by thresholding.
* Then we applied Canny Edge detection algorithm on the resultant binary image obtained above to get resulted edge detected image.
* After this we applied Morphological techniques to enhance the edges namely Dilation.
* The dilated image is then processed for filling gaps and holes using morphological holes filling techniques.
* Then we find all the connected components in the resulting image and store their positions and values in an array-list named *contours.*
* Then by using the values from the *contour* array the images are cropped.

Binary Image

Gray scale image

Input Image

Holes filling

Dilation

Edge Detection

Cropping and isolating contours

Finding contours

*Note : To run our code you first need opencv libraries in java.*