METHODOLOGY

1. To detect the edges of the images normally edge deteection algorithm is used in which canny edgedetection is popular. First I tried with Canny edge detection but there were errors in the detection of edges of paper at different lighting condition as the image has to be converted into gray scale image and the output contained errors while detecting the edges.

2. So I turned to another approach which I implemented in this assesment. I learned it from Youtube contour detection from which I got the idea of converting the image into HSV image. The input image is in BGR format, which I converted it into HSV format.

3. After converting into HSV, I detected the white color threshold values in the HSV format. For different lighting conditions the saturation of the white varies but within a certain tolerance band which I decided through trial and error. At different lighting conditons the sensitivity variable in the program changes. The default value at present is applicable for most of the backgrounds and lighting conditons.

4. After that I got a thresholded image and then I found the contours in the image and drew a polygon across the largest contour area that is detected.

5. The problem with this method is that it cannot distinguish between the image and background if the background is in white colour then the paper cannot be detected. Again when the paper is folded at the edges some of the portion of paper is snipped off from the image and this can be rectified by the manual selection of the edges which happens in Camscanner. Maybe by implementing the K-means clustering algorithm this problem can be solved.