The main objective of our project is image segmentation. We perform the segmentation task by grouping the pixels which are homogeneous. This method is called superpixels method, which is usually used as a pre-processing step for computer vision applications. The superpixel method generates an over-segmented image which preserves the overall structure of the image. One of the main advantages of this method is that the computational cost can be reduced by substituting thousands of pixels with fewer )hundreds) of superpixels.