ASSIGNMENT : Image Segmentation

You are given a set of fundus images. Write programs in MATLAB/python to perform segmentation of blood vessels using :

i. Intensity based thresholding. **(20 marks)**

ii. Region growing. Choose seed pixel belonging to the vessel region (manually or automatically). Grow the region based on homogenous gray-level/color/texture/shape. You may choose multiple seed pixels, if needed. **(30 marks)**

iii. Image matting. Trimap can be generated in a number of ways, one of them is using intermediate vessel maps obtained using region growing. **(50 marks)**

For more understand on image matting, refer the research paper :

Fan, Zhun, et al. "A hierarchical image matting model for blood vessel segmentation in fundus images." ***IEEE Transactions on Image Processing*** **28.5 (2018): 2367-2377.**

(PFA the pdf of above mentioned paper)