**Part A (binary images, shape recognition)**

1. **Obtain the images of 10 flat objects of different shapes from different distances and orientations. For each object, acquire minimum 5 images. Binarize the acquired images.**
2. **Implement few shape factors that will be the following as features useful in the process of classification of objects contained in the images acquired in pt.1.**
3. **Build a classifier that classifies as accurately as possible the objects contained in 50 binary images into 10 classes.**

**Part B (color images, color quantization)**

1. **Acquire 18 color images from McMaster image database from WWW page:**

   **https://www4.comp.polyu.edu.hk/~cslzhang/CDM_Dataset.htm**

2. **Implement k-means technique based on random Forgy's initialization and k-means++ technique for color image quantization.**
3. **Generate quantized images for the following color palettes: k=8, 16, 32, 64, 128, 256. Use both implemented techniques.**
4. **Compare the obtained images with their originals by using MSE and PSNR indices.**