

## Matlab Project #3 – K-Means Clustering

### Introduction

In this project we'll implement the K-Means Clustering algorithm.

**Note:** in this lab we'll work with images and not with video.

### Task

- Describe the K-Means Clustering algorithm.
- Implement the K-Means Clustering algorithm

**[IDX,C] = kmeans\_my(X,k);**

without using Matlab's command **kmeans**. (Hint: Execute the command **help kmeans** in order to find a brief description of the K-Means Clustering algorithm and the definitions of parameters **X**, **k**, **IDX** and **C**. A detailed description of the K-Means Clustering algorithm can be found in the lecture notes.)

- Test your Matlab implementation of the algorithm on images and provide the results of clustering.
- Provide Matlab code of your implementation of the algorithm.

### Submission

You have to submit the Project Report (with the code included in printed form) at 07/05/2013 at the lab (from 13:00 until 14:00) or on the Video Processing lesson (at the breaks between the lectures).