Balanced k-means is based on paper

M. I. Malinen and P. Fränti, "Balanced K-means for Clustering", Joint Int. Workshop on Structural, Syntactic, and Statistical Pattern Recognition (S+SSPR 2014), LNCS 8621, 32-41, Joensuu, Finland, August 2014

The source code is available at

http://cs.uef.fi/sipu/soft/Balanced\_kmeans\_Malinen.zip

Hungarian (Munkres’) algorithm implementation is from

http://www.mathworks.com/matlabcentral/fileexchange/20652-hungarian-algorithm-for-linear-assignment-problems-v2-3