Please carefully read and follow the general instructions regarding notebook assignments. Failing to meet the requirements might lead to penalties. *https://elearn.uef.fi/mod/page/view.php?id=293750*
   If you suspect that something is wrong with some task instructions, please contact the lecturer.
   If you face persistent issues while working on a task, do ask for help, e.g. during a course meeting or by contacting the lecturer via email.

Attached material

– `clustering_beans.ipynb` an example Python notebook

– `Dry_Bean_Dataset_small.csv` a small variant of the *beans* dataset from https://archive.ics.uci.edu/dataset/602/dry+bean+dataset.

Task 1 (Basics of clustering on the *beans* **dataset).**
The Python notebook `clustering_beans.ipynb` provides an example of applying various clustering algorithms to a small variant of the *beans* dataset from https://archive.ics.uci.edu/dataset/602/dry+bean+dataset. This notebook shows an example of how to prepare the dataset, how to run different clustering algorithms from the popular `sklearn` library on the data, and how to compare and evaluate the results.
   Read and run through it.
You should add your observations about the dataset, the mining process and the obtained results, throughout the notebook, as relevant.

Task 2 (Clustering on other datasets).
Carry out a similar analysis on some other datasets, such as

– *glass* from https://archive.ics.uci.edu/dataset/42/glass+identification

– *letter* from https://archive.ics.uci.edu/dataset/59/letter+recognition

– *covertype* from https://archive.ics.uci.edu/dataset/31/covertype

   Start from the provided example notebook, edit and adjust the explanations and observations according to the dataset you consider and the results you obtain.
   In other words, for each dataset, you should explain what the dataset represents, scrutinize the results and comment on how to interpret them.
   You should consider one other dataset. You might consider datasets of your own choosing.