The dataset you will work with is a bike rental dataset, provided in 2 datasets. It concerns data from about 11.000 individuals and contains 12 variables (including a target). This information can be used to predict how many bikes will be rented according to weather, season, day etc.

Task 1) In this exercise, you are asked to develop regression algorithms to predict how many bikes will be rented within each slot. For the training dataset we do have a target variable to build the algorithms. For the testing dataset the target has been removed. Develop at least 3 models (2 of them should be SVM and a decision tree-based model) to predict the target variable for the testing dataset. Then discuss how consistent the predictions between the three algorithms are

Task 2) Do clustering in the dataset and create clusters that separate the dataset into homogeneous groups. For that you will need to combine the two files together. Do the clusters separate based on the target variable?

**There is the possibility to get bonus points on this assignment. To do so you must provide in a separate file the predictions of your algorithm for the test set in task 1 by the 22nd of May. If you do so, you will be provided with the actual errors of the 3 models on your test dataset. Following this you will have to re-train your models and submit your predictions again with the final submission. You will also get feedback on if the models improved.**