Implementation of module 1:

Module 1 deals with clustering of data. The data being used consists of the number of electrical equipment in 200 households and the electricity consumed in watts by the households for one year. The electrical components considered in this dataset are the commonly used electrical devices, namely fan, light and AC. In order to cluster the data and assign each household to the proper cluster, the dataset was analysed. Firstly, the electricity consumption of all the households was analysed. The households were clustered on the basis of the total electricity consumption. Secondly, the households were clustered on the basis of the electricity consumption of each electrical device. The households were next clustered o with respect to fan-light, fan-AC, light-AC consumption. On analysis, it was understood that the clustering of the apartments with respect to total electrical consumption showed similar trends to clustering of the apartments with respect to the consumption of electricity by the electrical device AC alone. Thus, it was understood that fan and lights are the devices which predominantly influence the changing trends in the total electricity consumption of each household.