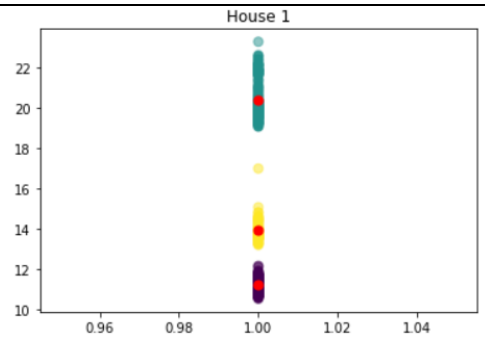
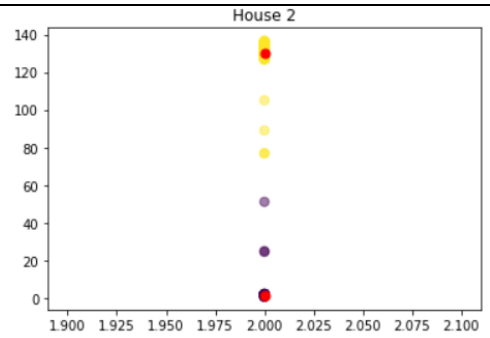
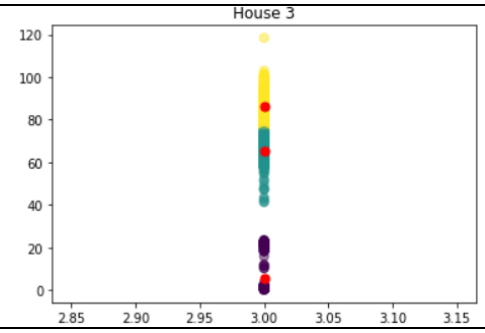
Exercise 2 Task 1

Table 1 result of K-mean clustering

House	Result of K mean clustering
1	
2	
3	

The table illustrates the results of K-mean clustering in the data of television consumption of three households. Each household has data for only one day.

In the data and the table above, the television consumption data of the first household could be clearly divided into 3 groups. The first group, from around 17 to 23 units, could be inferred that television was ON, which has an average power consumption at around 20 units. In the second group data, although, there were outliers, it could still be inferred obviously that this group was STANBY MODES, which had an average

power consumption at around 14 units. In the last group, the data should be interpreted as OFF MODE, even though, the average of power consumptions were not almost 0 unit. Likewise, the data consumption of the third household could be divided into 3 groups, even though, there was a part where the data was continuous. The range of power consumption from around 80 to 120 units was interpreted as ON MODE of television, which had an average of television power consumption more than the first household at around 82 units. There were averages of power consumption at around 70 and 4 units for STANDBY MODE and OFF MODE respectively.

Nevertheless, the second household has a different nature of data from the others. The data was obviously distributed in two groups, although there were outliers. The first group was interpreted as ON MODE of television, which had an average at around 130 units. In the other hand, the second group was considered as OFF MODE, which had an average at around 0 unit.