**ARAVINDH.M**

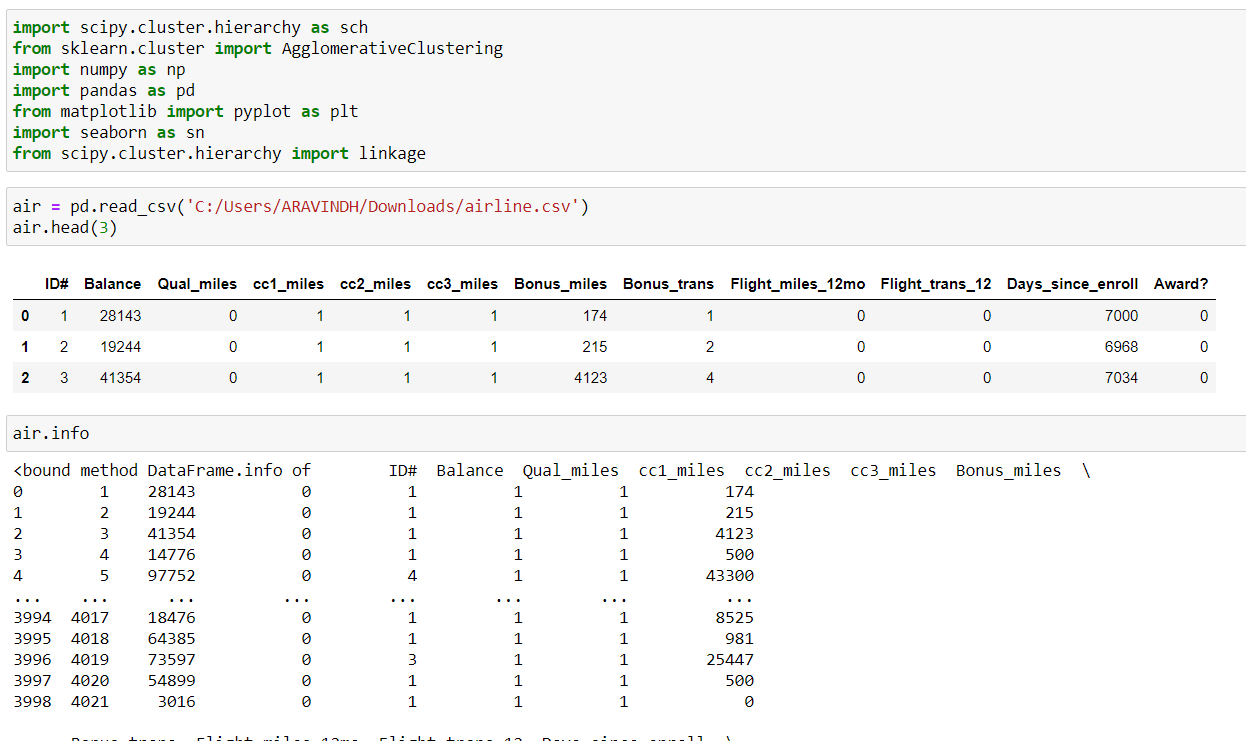
**ASSIGNMENT 7**

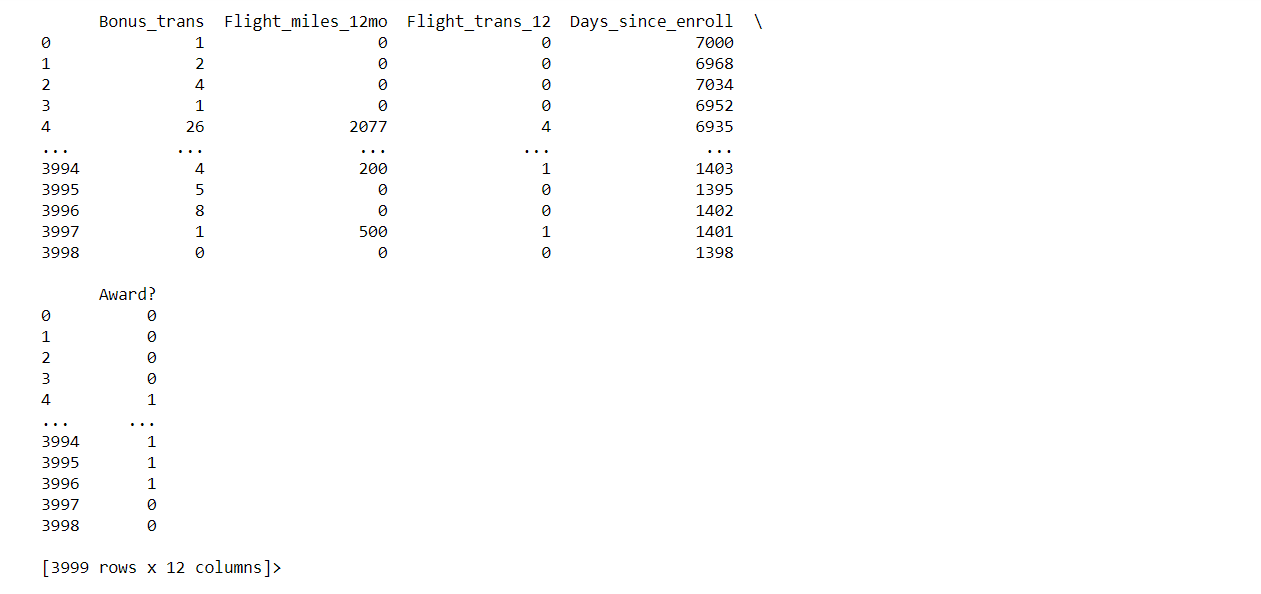
**TOPIC: HIERARICAL CLUSTERING AND K-MEANS CLUSTERING**

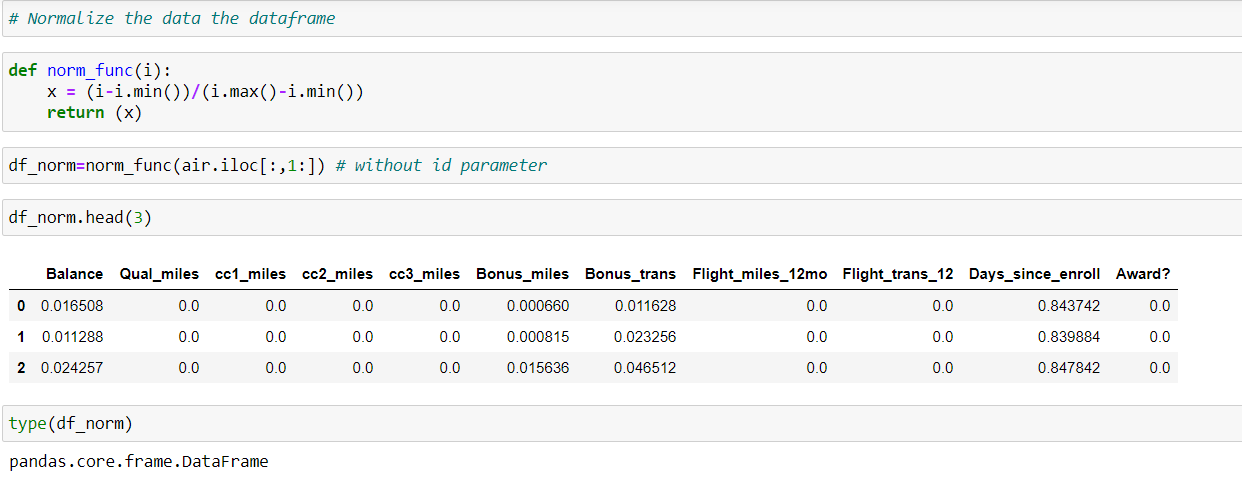
**QUESTION:**

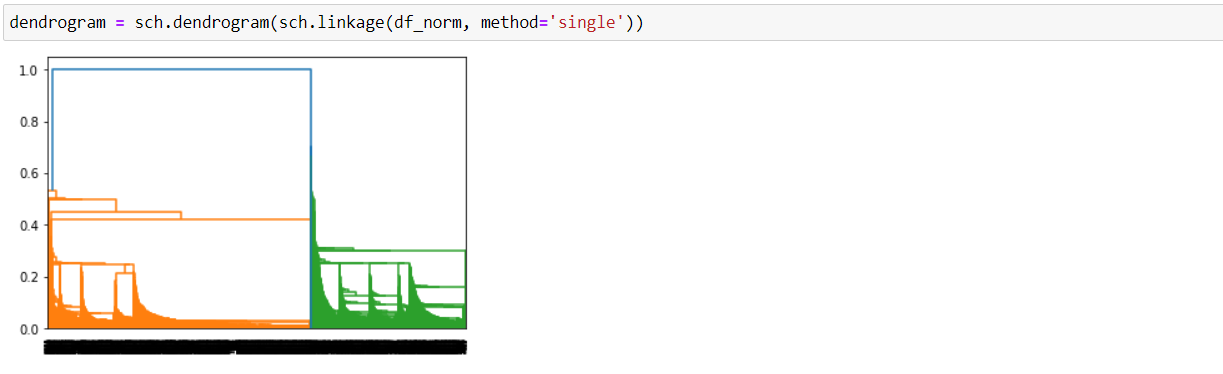
**Perform clustering (Both hierarchical and K means clustering) for the airlines data to obtain optimum number of clusters. Draw the inferences from the clusters obtained.**

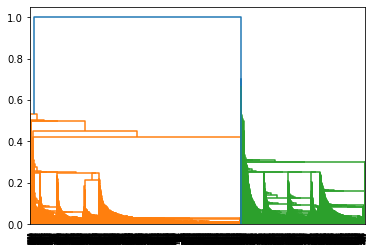
**HIERARICAL CLUSTERING:**







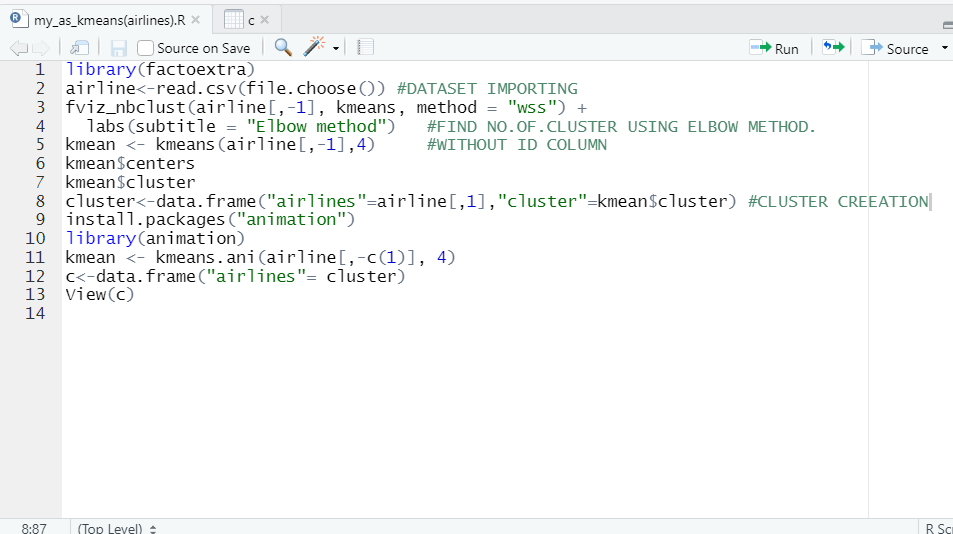




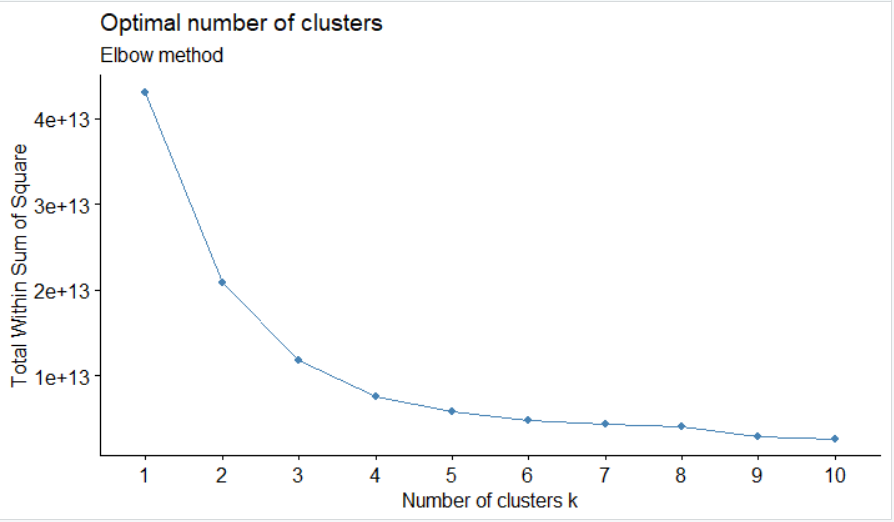


* Here we cannot make good inferences by using dendrogram graph because this dataset size is large.
* For larger data hierarchical clustering is not good method.so we use another clustering called k-means clustering.
* In this assignment we are going to use Rstudio for K-means for visualization.

**K-MEANS:**

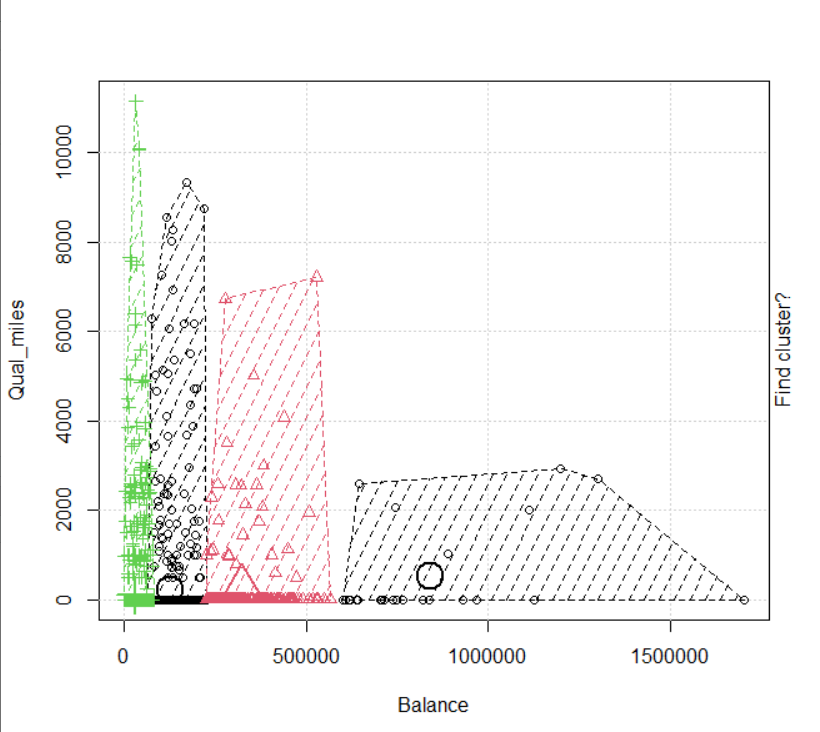
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**FINDING NUMBER OF CLUSTER USING ELBOW METHOD:**

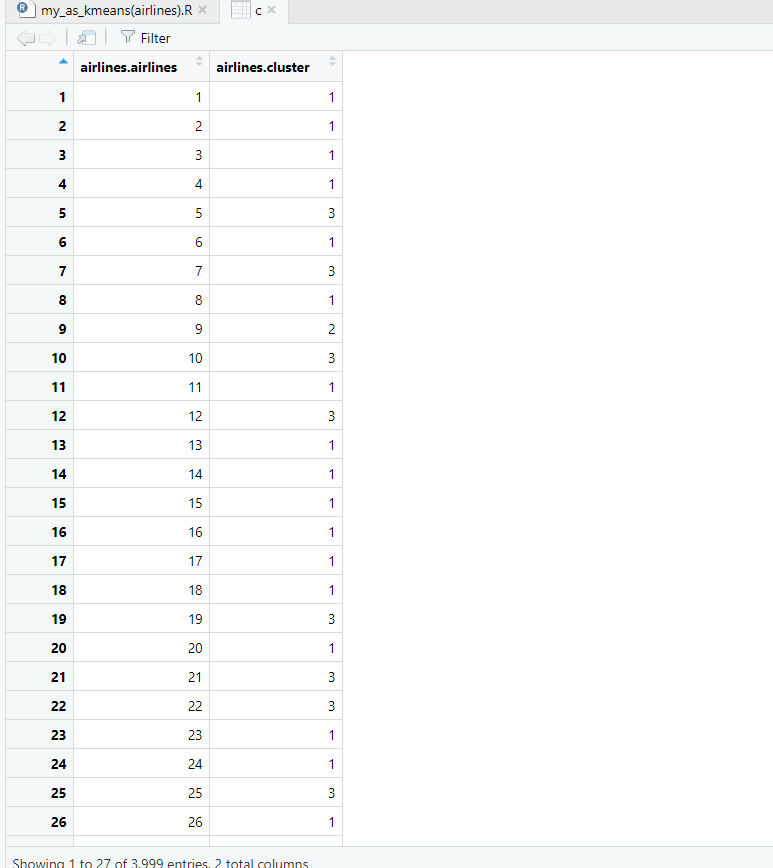
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**According to above elbow curve number of cluster(k)=4**

**PLOT:**

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**CLUSTER:**

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