**Project Report 9**

Hierarchical K-Means: Construction of Hashing Tree

Name : DHIVAKAR . R

COURSE : AI and ML

**Prerequisites**

What things you need to install the software and how to install them:

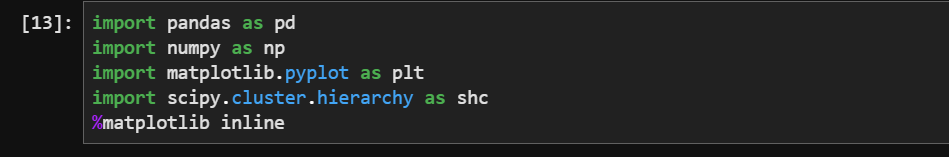
Python 3.6 This setup requires that your machine has latest version of python. The following url <https://www.python.org/downloads/> can be referred to download python. Once you have python downloaded and installed, you will need to setup PATH variables (if you want to run python program directly, detail instructions are below in how to run software section). To do that check this: [https://www.pythoncentral.io/add-python-to-path-python-is-not- recognized-as-an-internal-or-externalcommand/](https://www.pythoncentral.io/add-python-to-path-python-is-not-%20recognized-as-an-internal-or-externalcommand/) . Setting up PATH variable is optional as you can also run program without it and more instruction are given below on this topic

Second and easier option is to download anaconda and use its anaconda prompt to run the commands. To install anaconda check this url <https://www.anaconda.com/download/> You will also need to download and install below 3 packages after you install either python or anaconda from the steps above Sklearn (scikit-learn) numpy scipy if you have chosen to install python 3.6 then run below commands in command prompt/terminal to install these packages pip install -U scikit-learn pip install numpy pip install scipy if you have chosen to install anaconda then run below commands in anaconda prompt to install these packages conda install -c scikit-learn conda install -c anaconda numpy conda install -c anaconda scip

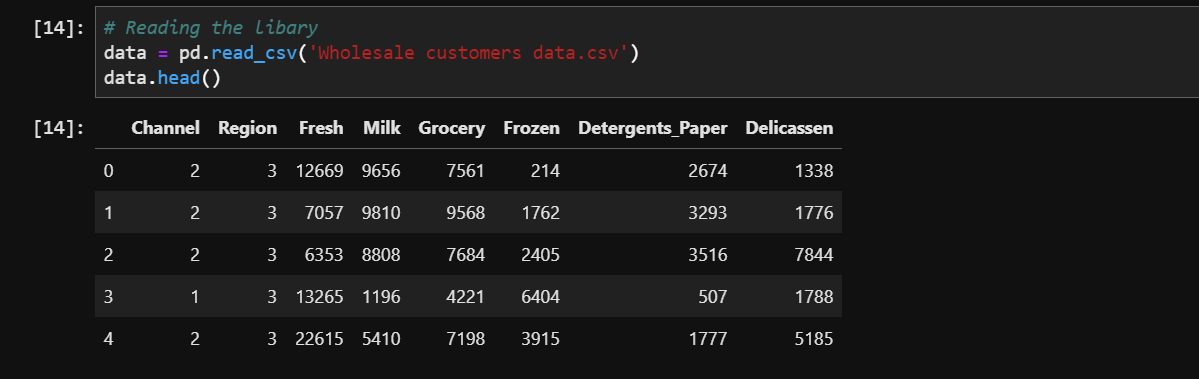
**Dataset used:**

The dataset used is randomly created dataset which is clustered into two clusters using Hierarchical K-Means.

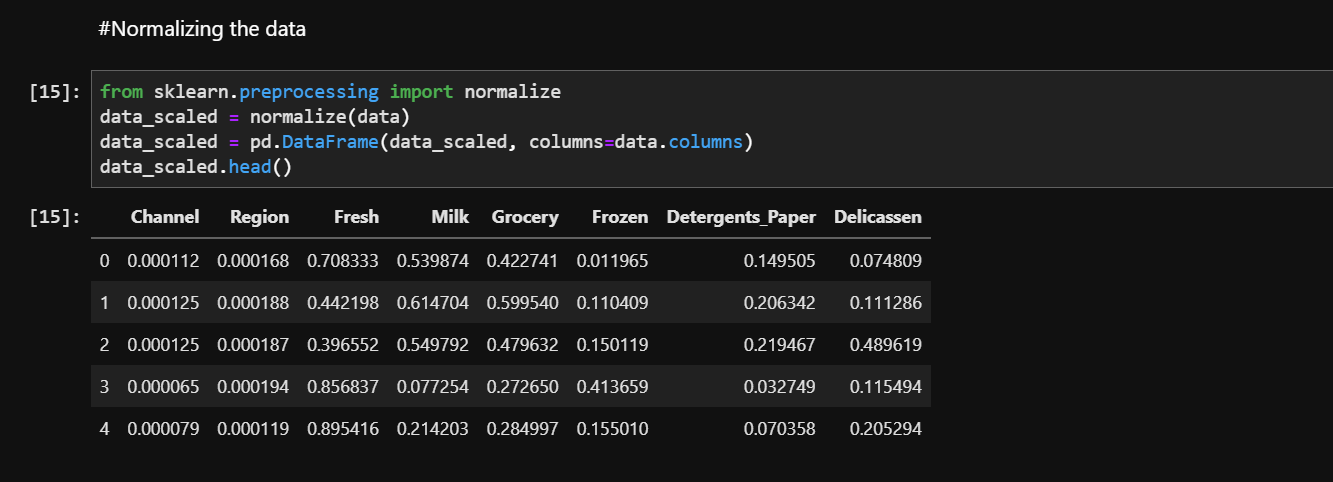
**Importing necessary Library**



**Reading the Library**



**Normalizing the data**



**Creating the dendogram**



**Output**

