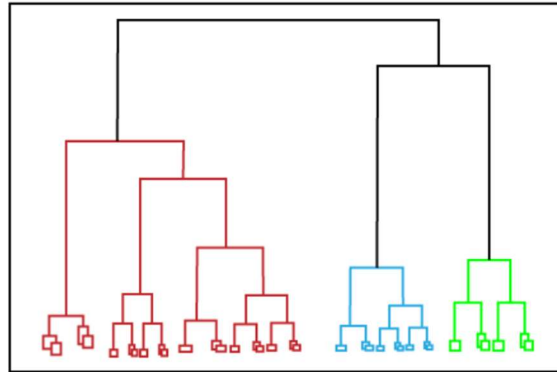


Hierarchical Clustering

Hierarchical clustering can be used as an alternative for the partitioned clustering as there is no requirement of pre-specifying the number of clusters to be created. In this technique, the dataset is divided into clusters to create a tree-like structure, which is also called a dendrogram. The observations or any number of clusters can be selected by cutting the tree at the correct level.

Hierarchical clustering creates a tree-like structure (dendrogram) to represent data points and their corresponding clusters. It can be either agglomerative (bottom-up) or divisive (top-down).



How it works: Agglomerative clustering starts with each data point as its own cluster and merges the closest pairs of clusters iteratively until a single cluster remains or a stopping criterion is met.