

**Finding Number of Clusters:**

To find number of clusters present in a hierarchical clustering algorithm, we need to locate 2 contiguous iterations where the change in distance between the clusters in those iterations is maximum. Then, all the clusters made after that iteration are individual clusters in the final result of the algorithm.

In the given dataset, if we observe the output file we can say that the maximum change in distance occurred at iteration 466 to 467 where the change in distance is 1.35709661749. So, we stop forming clusters after iteration 466.

$$\begin{aligned}\text{Number of clusters} &= \text{Total Number of Iterations} - \text{Iteration after which we stop} + 1 \\ &= 468 - 466 + 1 \\ &= 3\end{aligned}$$

**Finding Outliers:**

By observing the clusters output we can say that there are no outliers which drastically affect the overall structure of the dendrogram.