Perform Principal component analysis and perform clustering using first

3 principal component scores (both hierarchical and k mean clustering(scree plot or elbow curve) and obtain

optimum number of clusters and check whether we have obtained same number of clusters with the original data

(class column we have ignored at the begining who shows it has 3 clusters)df

**ANS**:- **NUMBER OF CLUSTERS**:-

**Type(original data)**

2 71

1 59

3 48

## Performing Hierarchical Agglomerative Clustering on PCA components.

**clustersid\_H**

0 71

1 59

2 48

## Performing K-MEANS Clustering on PCA components

**clusterid\_Kmeans**

0 71

2 59

1 48