NAME: Penugonda Abhignanendra **REGNO**:19BCE1677
FACULTY: Dr. Lakshmi Pathi Jakkamputi **SLOT**: L21, L22

Essential of Data Analytics
Tasks for Week-8: Hierarchical Clustering

Aim: Understand the following operations/functions on 'USArrests' data and perform similar operations on 'iris' dataset based on given instructions.

Algorithm:

- removing all the values from the global environment.
- Set the working directory to the dataset where we store by using setwd().
- To see the dataset use view() function.
- By using scale function. We scale the data and store it in another variable.
- To see the dataset use view() function.
- Find the Euclidean distance using the dist() function and method="euclidean".
- Find the hierarchical clustering using hclust and method = "complete.
- For plotting the dendrogram we use plot function.
- Grouping the dataset into no of cluster using cutree function and plotting them.
- Use rec.hclust to find the cluster.

Result:

Dataset: iris.csv:

Dendrogram:

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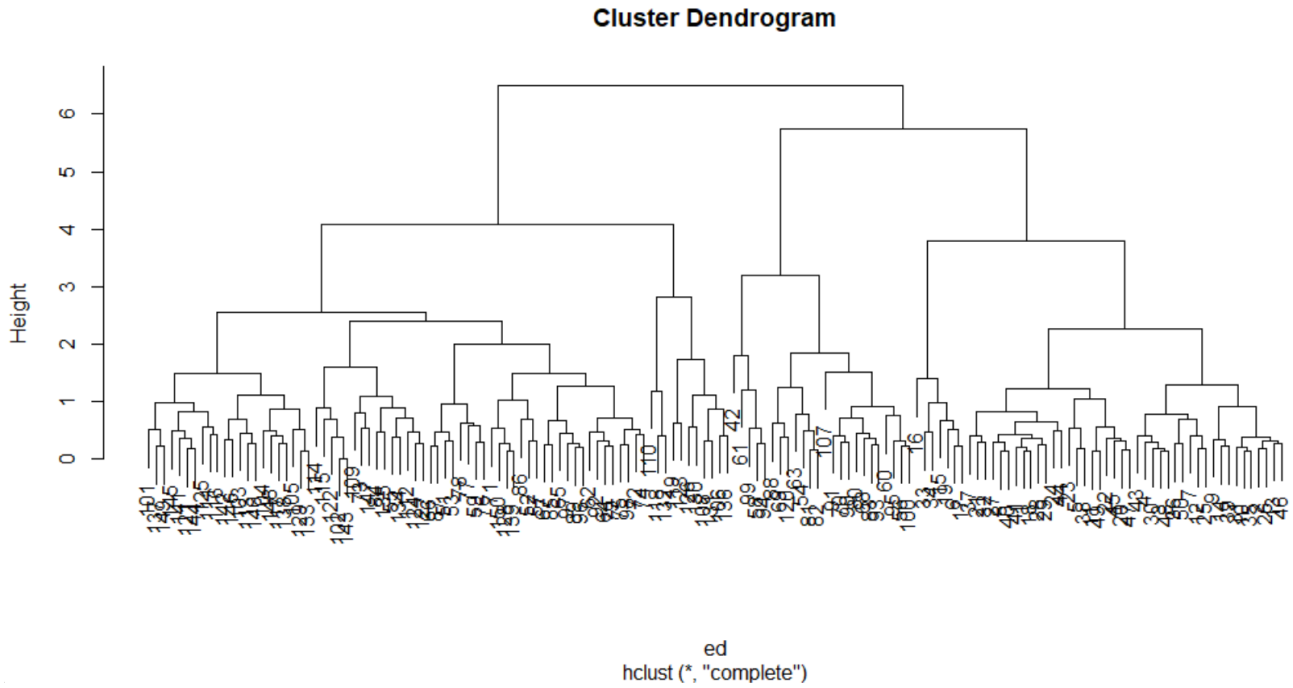
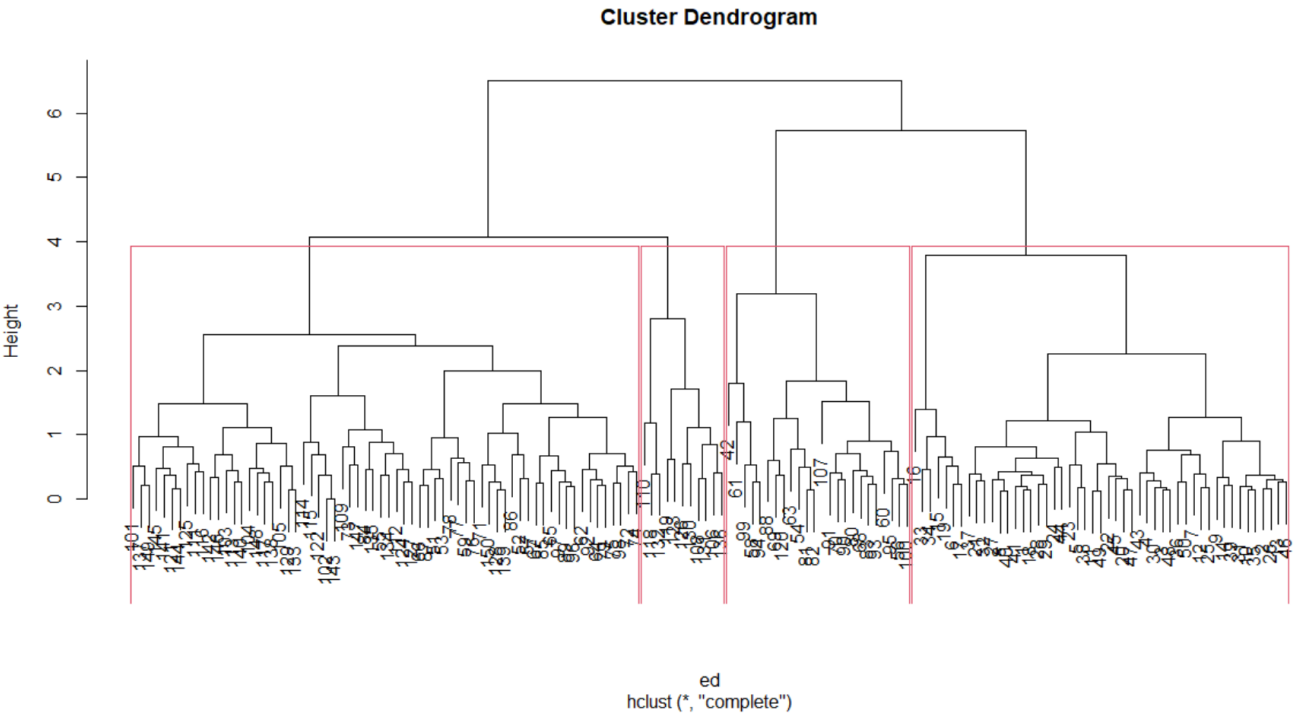


Clusters:

The no of cluster I have chosen is 4.



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Code:

```
rm(list=ls())
setwd("C:/Abhi notes/class3-2/eda/lab/Lab 8")
data<-read.csv("iris.csv",row.names=1)
View(data)
df<-scale(data)
View(df)
ed<-dist(df,method='euclidean')
herclust<-hclust(ed,method='complete')
plot(herclust)
cluster1<-cutree(herclust,k=4)
cluster1
rect.hclust(herclust,k=4)
```