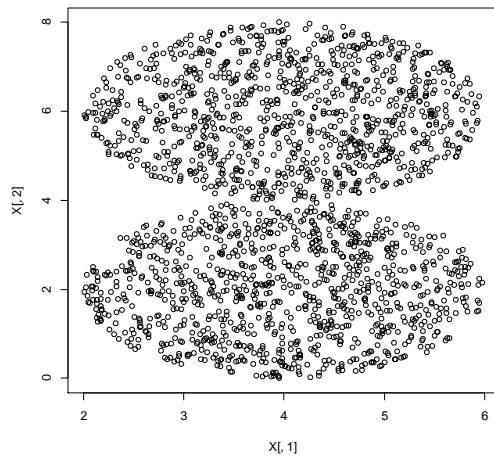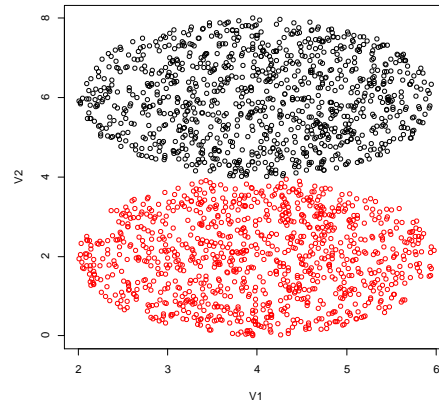# Two Circle Data sets

Before Clustering   After Clustering

K=2

Number iteration = 5

> mean(X[which(myCluster[] == 1),])

[1] 5.00775

mean(X[which(myCluster[] == 2),])

[1] 2.981648

dim(X[which(myCluster[] == 1),])

[1] 1000   2

dim(X[which(myCluster[] == 2),])
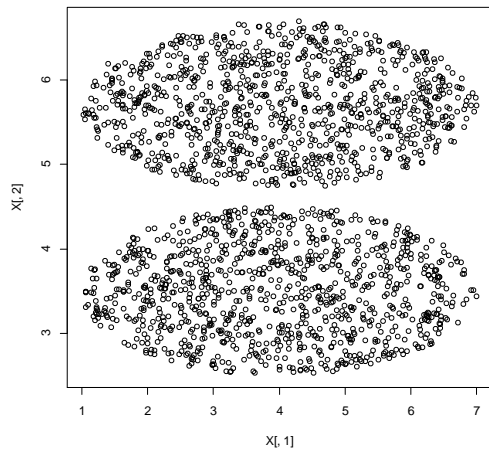
[1] 1000   2

delta
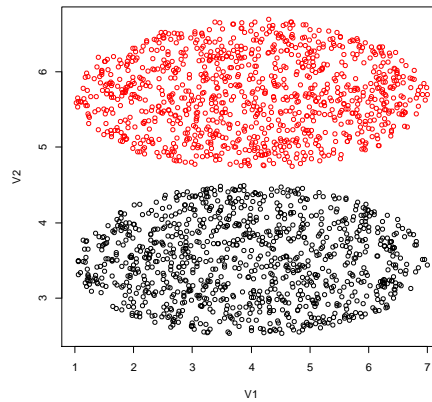
[1] 1.675585e-05

Two Ellipses Dataset

Before Clustering

After Clustering

K=2

totalIteration

[1] 6

mean(X[which(myCluster[] == 1),])

[1] 4.92484

mean(X[which(myCluster[] == 2),])

[1] 3.64489

> dim(X[which(myCluster[] == 1),])
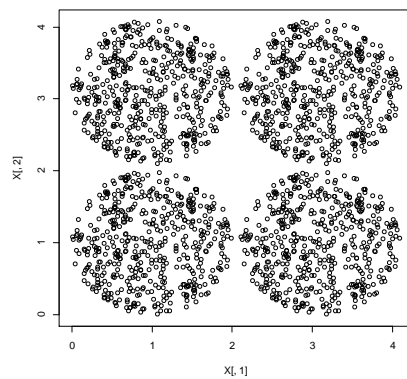
[1] 996   2

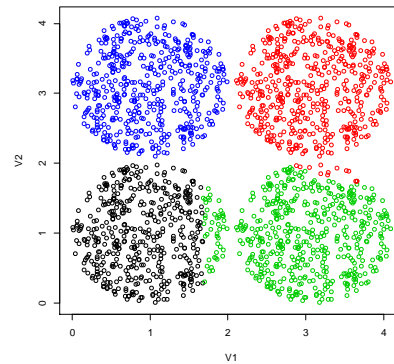> dim(X[which(myCluster[] == 2),])

[1] 1004   2

delta

[1] 0.0006514311

Four Circles

Before Clustering   **After Clustering**

K=4

totalIteration

[1] 2

mean(X[which(myCluster[] == 1),])

[1] 0.9356993

> mean(X[which(myCluster[] == 2),])

[1] 3.069266

> mean(X[which(myCluster[] == 3),])

[1] 1.966224

> mean(X[which(myCluster[] == 4),])

[1] 2.031559

dim(X[which(myCluster[] == 1),])

[1] 454   2

> dim(X[which(myCluster[] == 2),])

[1] 513   2

> dim(X[which(myCluster[] == 3),])
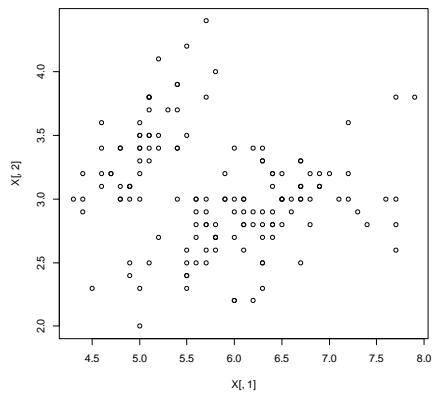
[1] 533   2

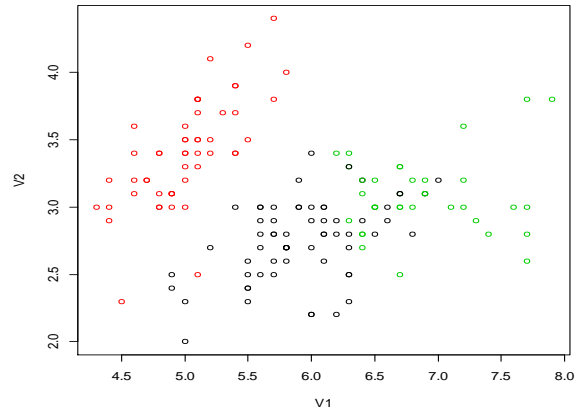> dim(X[which(myCluster[] == 4),])

[1] 500   2

delta

[1] 1.587896e-05

Iris Dataset

Before Clustering

After Clustering

totalIteration

[1] 6

> mean(X[which(myCluster[] == 1),])

[1] 4.434211

> mean(X[which(myCluster[] == 2),])

[1] 2.533

> mean(X[which(myCluster[] == 3),])

[1] 3.619355

> dim(X[which(myCluster[] == 1),])

[1] 38 4

> dim(X[which(myCluster[] == 2),])
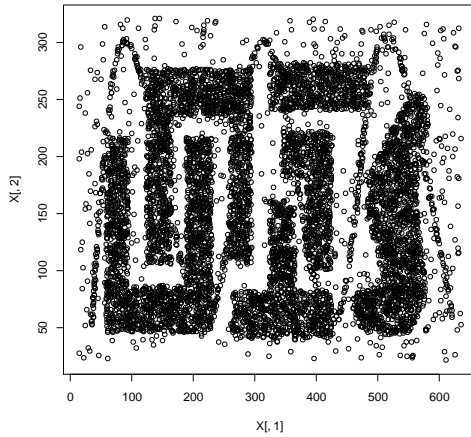
[1] 50 4
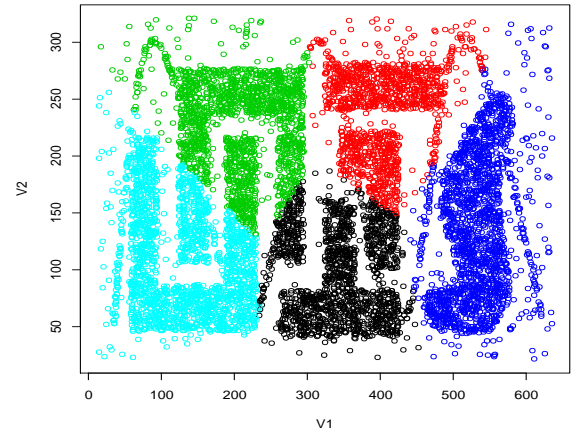
> dim(X[which(myCluster[] == 3),])

[1] 62 4

> delta

[1] 0.002285441

t4.8k Dataset

Before Clustering   **After Clustering**


```
totalIteration
[1] 20
> mean(X[which(myCluster[] == 1), ])
[1] 220.7042
> mean(X[which(myCluster[] == 2), ])
[1] 322.1595
> mean(X[which(myCluster[] == 3), ])
[1] 217.4908
> mean(X[which(myCluster[] == 4), ])
[1] 334.9715
> mean(X[which(myCluster[] == 5), ])
[1] 119.9815
> dim(X[which(myCluster[] == 5), ])
[1] 1871    2
> dim(X[which(myCluster[] == 1), ])
[1] 1503    2
> dim(X[which(myCluster[] == 2), ])
[1] 1208    2
> dim(X[which(myCluster[] == 3), ])
[1] 1620    2
> dim(X[which(myCluster[] == 4), ])
[1] 1798    2
> dim(X[which(myCluster[] == 5), ])
[1] 1871    2
> delta
[1] 0.03532205
```