k-means clustering Experiment 7

```
health=iris
health =health[1:15, 1:2];
km=kmeans(health,4)
km
plot(health,col=km$cluster)
points(km$centers,pch=2)
km$cluster
km$centers
km$totss
km$withinss
km$tot.withinss
km$betweenss
km$size
```

OUTPUT:

```
K-means clustering with 4 clusters of sizes 4, 3, 2, 6

Cluster means:
  Sepal.Length Sepal.Width
1     4.975000    3.475000
2     5.533333    3.866667
3     4.350000    2.950000
4     4.750000    3.133333

Clustering vector:
 1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
 1  4  4  4  1  2  4  1  3  4  2  1  4  3  2

Within cluster sum of squares by cluster:
[1] 0.0750000 0.1533333 0.0100000 0.2083333
 (between_SS / total_SS =  88.5 %)

Available components:

[1] "cluster"      "centers"       "totss"        "withinss"      "tot.withinss"
[6] "betweenss"    "size"          "iter"         "ifault"

> km$cluster
 1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
 1  4  4  4  1  2  4  1  3  4  2  1  4  3  2
> km$centers
  Sepal.Length Sepal.Width
1     4.975000    3.475000
2     5.533333    3.866667
3     4.350000    2.950000
4     4.750000    3.133333
> km$totss
[1] 3.874667
> km$withinss
[1] 0.0750000 0.1533333 0.0100000 0.2083333
> km$tot.withinss
```

```
[1] 0.4466667
> km$betweenss
[1] 3.428
> km$size
[1] 4 3 2 6
```


Sepal.Width vs Sepal.Length