Data Visualisation – Lab 7
Clustering

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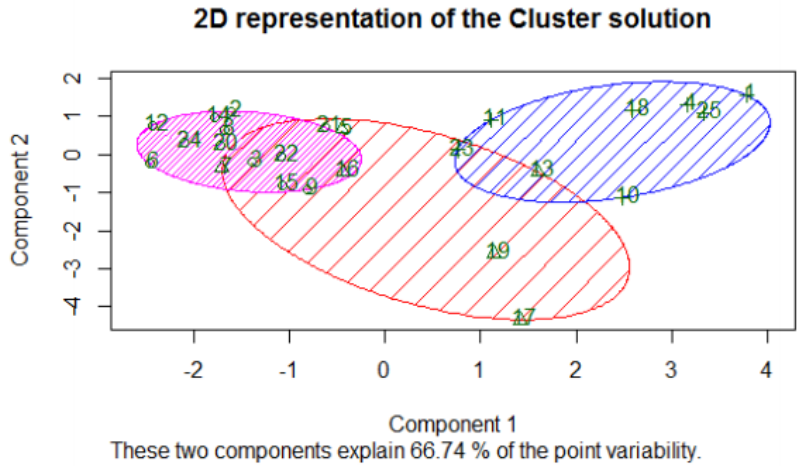
Ques. Plotting K-Means for European Protein Consumption

Code:

```
url =
'http://www.biz.uiowa.edu/faculty/jledolter/DataMining/protein.csv'
food<-read.csv(url)
head(food)
set.seed(1234)
grp<-kmeans(food[,c(2:10)],centers=3,nstart=10)
grp
## list of cluster assignments
o=order(grp$cluster)
data.frame(food$Country[o],grp$cluster[o])
grpProtein <- kmeans(food[2:10], centers=3, nstart=10)
o=order(grpProtein$cluster)
data.frame(food$Country[o],grpProtein$cluster[o])
fviz_cluster()
clusplot(food[3:10], grpProtein$cluster, main='2D
representation of the Cluster solution', color=TRUE,
shade=TRUE, labels=3, lines=0)
foodagg=agnes(food,diss=FALSE,metric="euclidian")
plot(foodagg, main='Dendrogram') ## dendrogram
groups <- cutree(foodagg, k=4) # cut tree into 3 clusters
rect.hclust(foodagg, k=4, border="green")
```

Screenshot:



Optimization Screenshots: