Example

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1 An Example run

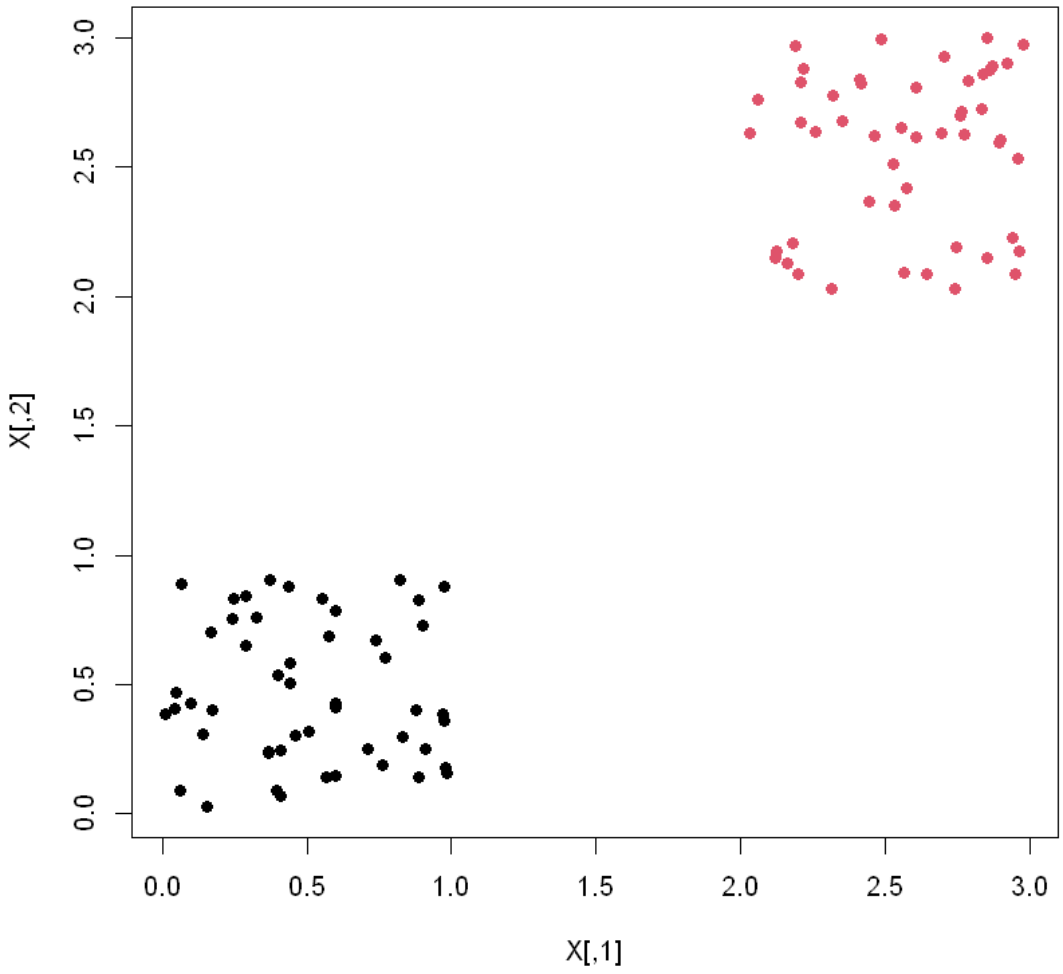
Load the libraries and source functions

[1]:
```
library(pracma)
source('functions.R')
```

Generate the data.

[2]:
```
X=rbind(rand(50,2), rand(50,2)+2)
toss=c(rep(1,50),rep(2,50))
```

[3]:
```
plot(X,col=toss,pch=19)
```



We now give an example run on this toy dataset. The ***t__wkmeans*** function takes in four arguments. They are:

Input:

- X: The $n \times p$ data matrix X, whose rows denote the data points.
- M: The $k \times p$ data matrix M, whose rows denote the initial centroids.
- β: The exponent used in W-k-means. Default value 4.
- tmax: THe maximum number of iterations to run. Default=30.

Output:

- Class Labels.
- Final Centroid matrix

- Final Feature Weights.

[4]:
```
M=X[sample(100,2),] # Randomly initialize the centroids
l=t_wkmeans(X,M) # Example run
```

Plot the results.

[5]:
```
plot(X,col=l[[1]],pch=19)
```