

## K means clustering in R on Tennis stats

The screenshot displays the RStudio interface with the following components:

- Source:** Contains the R script used for data loading and clustering.
- Console:** Shows the execution output, including cluster means, clustering vector, within-cluster sum of squares, and available components.
- Environment:** Lists the objects in the global environment, including 'Data', 'testData', and 'testData.features'.
- History:** Shows the sequence of executed commands.

**Source Script:**

```
> Data<-read.csv("~/home/raghu/Training Data_Result prediction.csv")
> Data[ncol(Data)]<-NULL #Added to remove the last column as it was string value
> clusterResults <-kmeans(Data,4)
> clusterResults
K-means clustering with 4 clusters of sizes 4, 5, 2, 1

Cluster means:
  Aces Double.Faults First.serve.points Second.serve.points Net.points Break.points
1    21         8.75         74.25             49.0         70.75         36.75
2    10         6.40         67.60             53.0         69.60         43.40
3    17         6.50         57.00             65.5          0.00         50.00
4     7         5.00         77.00             58.0         69.00        100.00

  Receiving.points Winners Unforced.errors
1         36.5         69          79.5
2         36.2         44          46.6
3         34.5         17           6.5
4         43.0         35          32.0

Clustering vector:
[1] 1 2 1 2 2 4 3 3 1 2 2 1

Within cluster sum of squares by cluster:
[1] 2795.0 2322.8 260.0  0.0
(between_SS / total_SS =  81.9 %)

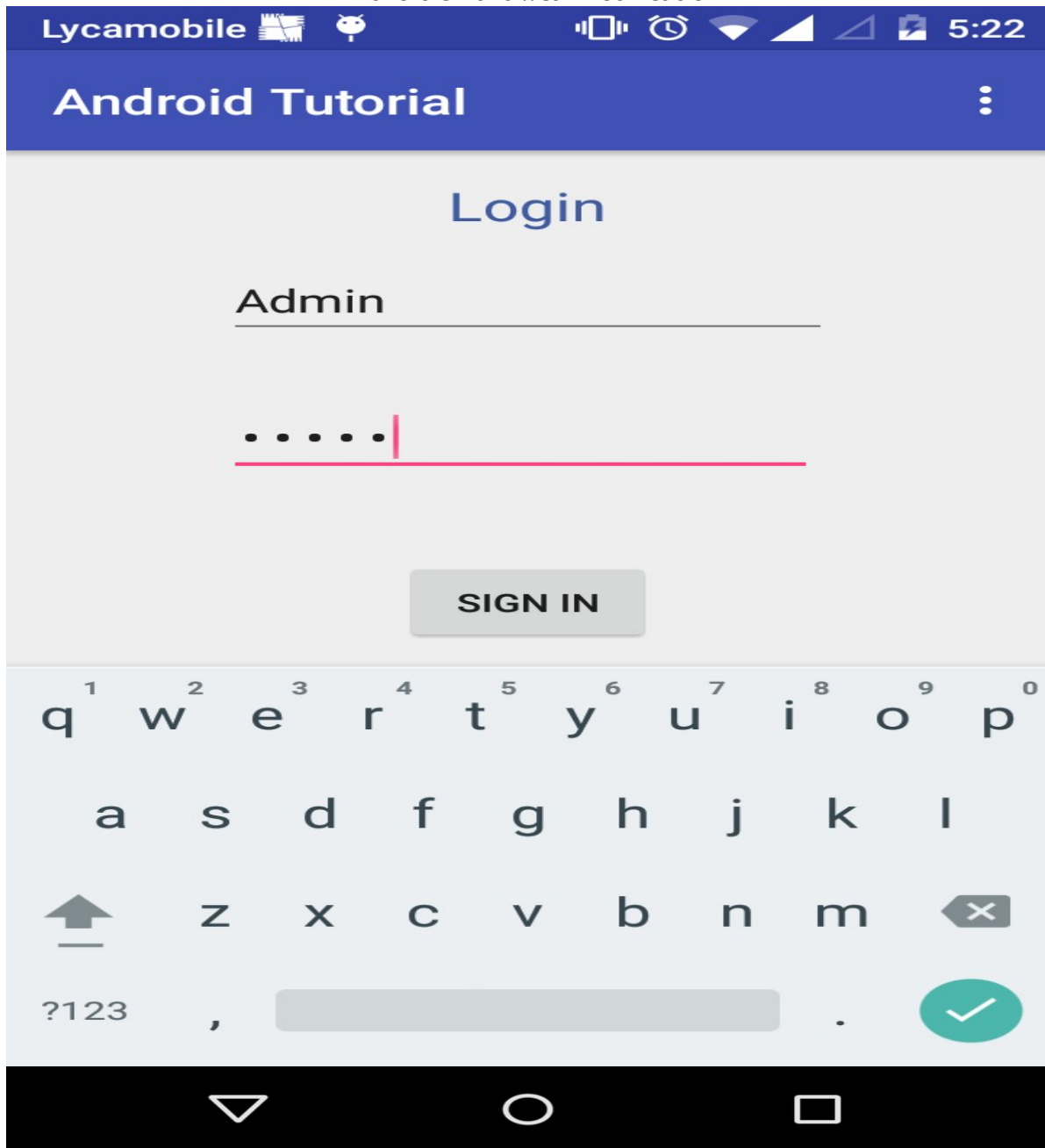
Available components:

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

**Environment:**

- Data:** 12 obs. of 9 variables
  - Aces : int 13 8 7 8 8 7 23 11 42 13 ...
  - Double.Faults : int 13 13 3 6 4 5 6 7 14 4 ...
  - First.serve.points : int 75 69 70 70 63 77 54 60 76 69 ...
  - Second.serve.points: int 51 42 49 59 49 58 69 62 51 61 ...
  - Net.points : int 81 69 82 69 90 69 0 0 59 64 ...
  - Break.points : int 33 40 25 36 50 100 54 46 45 36 ...
  - Receiving.points : int 41 38 34 39 30 43 39 30 34 36 ...
  - Winners : int 50 30 60 41 46 35 23 11 97 59 ...
  - Unforced.errors : int 87 60 83 39 58 32 6 7 75 34 ...
- testData:** 12 obs. of 9 variables
- testData.features:** 12 obs. of 9 variables
- clusterResults:** List of 9
- result:** List of 9
- results:** List of 9

## Android smart wear notification





# Android Tutorial

LOGOUT

Hello

Hola

CONVERT

