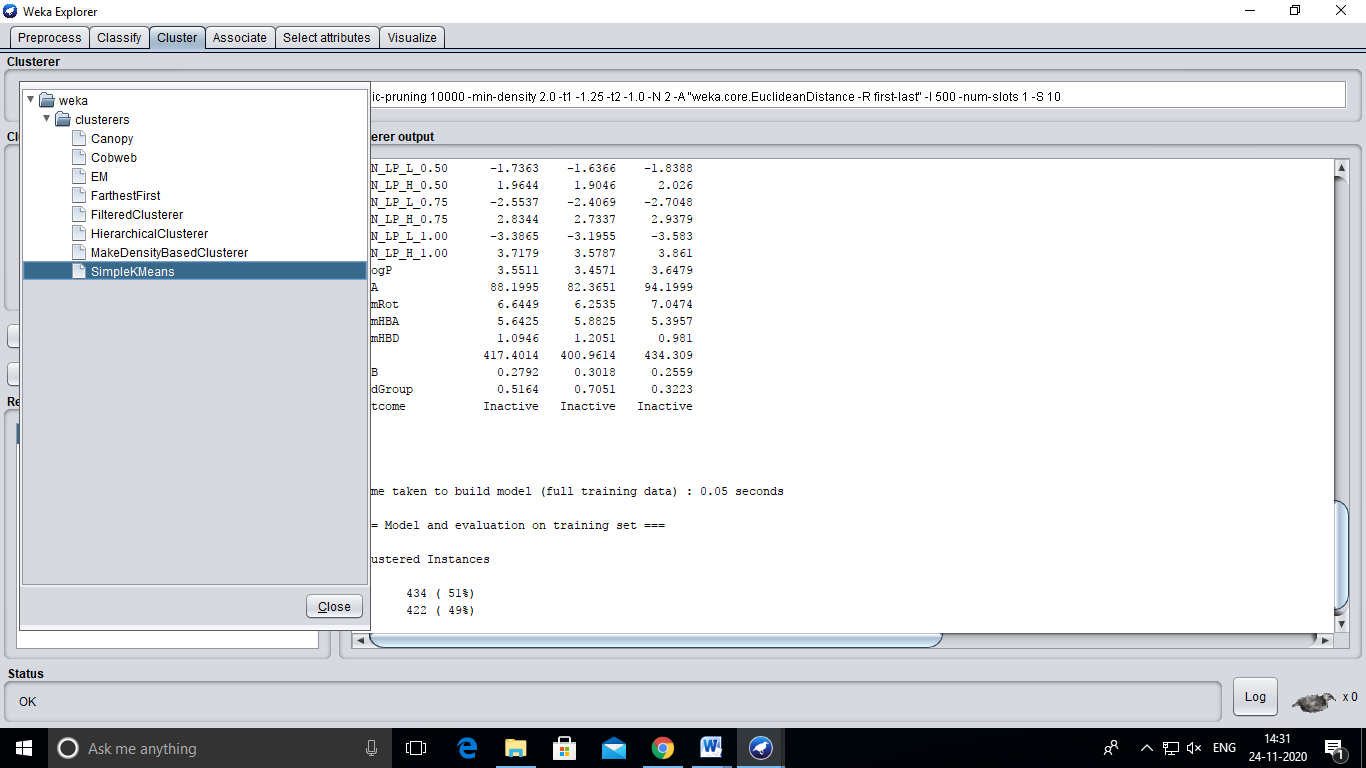
**4.Write a program to implement k-mediods clustering algorithm**

****

**Output:**

== Run information ===

Scheme: weka.clusterers.SimpleKMeans -init 0 -max-candidates 100 -periodic-pruning 10000 -min-density 2.0 -t1 -1.25 -t2 -1.0 -N 2 -A "weka.core.EuclideanDistance -R first-last" -I 500 -num-slots 1 -S 10

Relation: unbalanced

Instances: 856

Attributes: 33

WBN\_GC\_L\_0.25

WBN\_GC\_H\_0.25

WBN\_GC\_L\_0.50

WBN\_GC\_H\_0.50

WBN\_GC\_L\_0.75

WBN\_GC\_H\_0.75

WBN\_GC\_L\_1.00

WBN\_GC\_H\_1.00

WBN\_EN\_L\_0.25

WBN\_EN\_H\_0.25

WBN\_EN\_L\_0.50

WBN\_EN\_H\_0.50

WBN\_EN\_L\_0.75

WBN\_EN\_H\_0.75

WBN\_EN\_L\_1.00

WBN\_EN\_H\_1.00

WBN\_LP\_L\_0.25

WBN\_LP\_H\_0.25

WBN\_LP\_L\_0.50

WBN\_LP\_H\_0.50

WBN\_LP\_L\_0.75

WBN\_LP\_H\_0.75

WBN\_LP\_L\_1.00

WBN\_LP\_H\_1.00

XLogP

PSA

NumRot

NumHBA

NumHBD

MW

BBB

BadGroup

Outcome

Test mode: evaluate on training data

=== Clustering model (full training set) ===

kMeans

======

Number of iterations: 11

Within cluster sum of squared errors: 816.9893947742129

Initial starting points (random):

Cluster 0: -2.3987,1.3515,-2.5265,2.0104,-2.7638,2.8582,-3.5261,3.7241,-0.7662,1.5357,-1.5565,2.3667,-2.3657,3.2222,-3.1904,4.0893,-1.0868,1.0701,-1.9162,1.8886,-2.7607,2.7375,-3.6126,3.6025,1.309,102.55,8,8,1,426.535,0,0,Inactive

Cluster 1: -1.4544,2.279,-1.9823,2.7362,-2.7293,3.5025,-3.5518,4.3763,-0.7837,2.4019,-1.5852,2.6771,-2.4576,3.2654,-3.3478,4.1813,-1.0489,1.1315,-1.8608,2.0166,-2.7446,2.9442,-3.6403,3.885,3.912,113.06,5,6,2,462.359,0,1,Inactive

Missing values globally replaced with mean/mode

Final cluster centroids:

Cluster#

Attribute Full Data 0 1

(856.0) (434.0) (422.0)

================================================

WBN\_GC\_L\_0.25 -2.0831 -2.1472 -2.0171

WBN\_GC\_H\_0.25 1.7947 1.7986 1.7907

WBN\_GC\_L\_0.50 -2.3175 -2.332 -2.3026

WBN\_GC\_H\_0.50 2.331 2.2964 2.3665

WBN\_GC\_L\_0.75 -2.7597 -2.6676 -2.8543

WBN\_GC\_H\_0.75 3.0835 3.0005 3.1688

WBN\_GC\_L\_1.00 -3.4255 -3.2248 -3.6319

WBN\_GC\_H\_1.00 3.9192 3.7917 4.0504

WBN\_EN\_L\_0.25 -0.7891 -0.7785 -0.8

WBN\_EN\_H\_0.25 1.5287 1.3895 1.6718

WBN\_EN\_L\_0.50 -1.6045 -1.5723 -1.6375

WBN\_EN\_H\_0.50 2.2032 2.0441 2.3668

WBN\_EN\_L\_0.75 -2.4343 -2.3724 -2.4979

WBN\_EN\_H\_0.75 2.992 2.8095 3.1798

WBN\_EN\_L\_1.00 -3.2713 -3.1756 -3.3697

WBN\_EN\_H\_1.00 3.8529 3.6305 4.0816

WBN\_LP\_L\_0.25 -0.9692 -0.9232 -1.0166

WBN\_LP\_H\_0.25 1.1365 1.1242 1.1491

WBN\_LP\_L\_0.50 -1.7363 -1.6366 -1.8388

WBN\_LP\_H\_0.50 1.9644 1.9046 2.026

WBN\_LP\_L\_0.75 -2.5537 -2.4069 -2.7048

WBN\_LP\_H\_0.75 2.8344 2.7337 2.9379

WBN\_LP\_L\_1.00 -3.3865 -3.1955 -3.583

WBN\_LP\_H\_1.00 3.7179 3.5787 3.861

XLogP 3.5511 3.4571 3.6479

PSA 88.1995 82.3651 94.1999

NumRot 6.6449 6.2535 7.0474

NumHBA 5.6425 5.8825 5.3957

NumHBD 1.0946 1.2051 0.981

MW 417.4014 400.9614 434.309

BBB 0.2792 0.3018 0.2559

BadGroup 0.5164 0.7051 0.3223

Outcome Inactive Inactive Inactive

Time taken to build model (full training data) : 0.05 seconds

=== Model and evaluation on training set ===

Clustered Instances

0 434 ( 51%)

1 422 ( 49%)