Practical No : 01

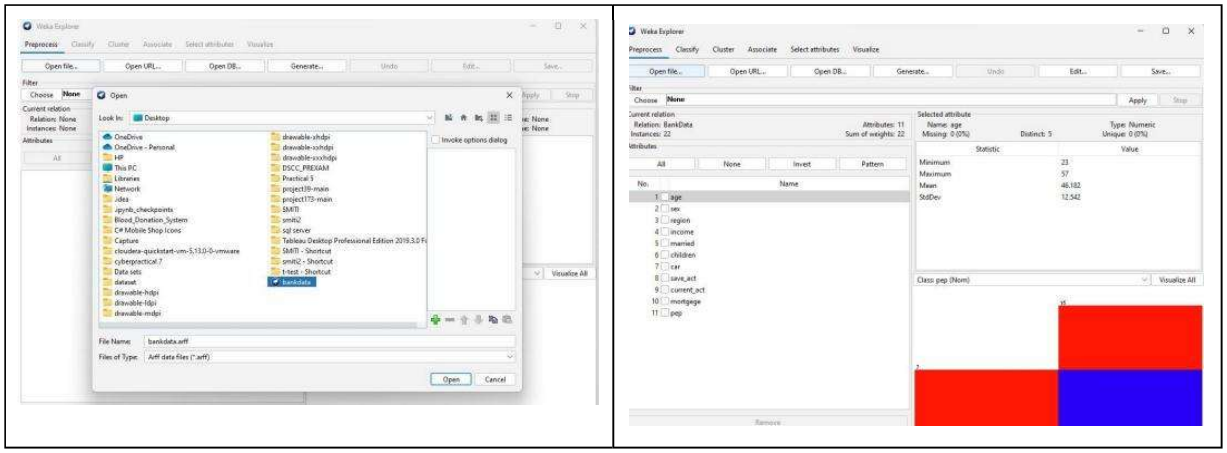
Aim: Pre-process the given data set to perform clustering using various techniques **(WEKA)**

Step1: First create a file with the name bankdata.arff using notepad as shown in the below:

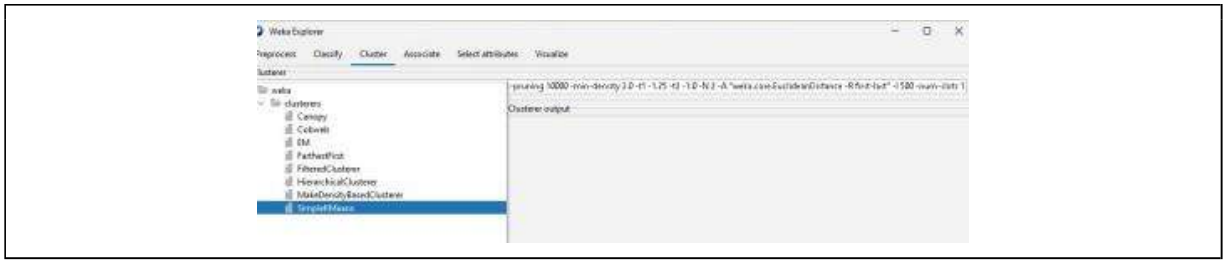
```
relation Banklata
@attribute age numeric
@attribute sex (FEMALE, MALE}
@attribute region (INNER_CITY, TOWN, RURAL, SUBURBAN)
@attribute income numeric
@attribute married (NO, YES)
@attribute children numeric
@attribute car [NO, YES]
@attribute save act (NO, YES}
@attribute current_act (NO, YES)
@attribute mortgege (NO, YES)
@attribute pep (YES, NO)
@data
48,FEMALE, INNER_CITY, 17546, NO, 1, NO, NO, NO, NO, YES
40, MALE, TOWN, 38885.1, YES, 3, YES, NO, YES, YES, NO
51, FEMALE, INNER CITY, 16525.4, YES, 0, YES, YES, YES, NO, NO
23, FEMALE, TOWN, 20375.4, YES, 3, NO, NO, YES, NO, NO
57, FEMALE, RURAL, 50576.3, YES, 0, NO, YES, NO, NO, NO
57, FEMALE, TOWN, 37869.6, YES, 2, NO, YES, YES, NO, YES
48, FEMALE, INNER_CITY, 17546, NO, 1, NO, NO, NO, NO, YES
40, MALE, TOWN, 38085.1, YES, 3, YES, NO, YES, YES, NO
51, FEMALE, INNER_CITY, 16525.4, YES, 0, YES, YES, YES, NO, NO
23, FEMALE, TOWN, 20375.4, YES, 3, NO, NO, YES, NO, NO
57, FEMALE, RURAL, 50576.3, YES, 0, NO, YES, NO, NO, NO
57, FEMALE, TOWN, 37869.6, YES, 2, NO, YES, YES, NO, YES
48 FEMALE, INNER_CITY, 17546, NO, 1, NO, NO, NO, NO, YES
40, MALE, TOWN, 38085.1, YES, 3, YES, NO, YES, YES, NO
51, FEMALE, INNER_CITY, 16525.4, YES, 0, YES, YES, YES, NO, NO
23, FEMALE, TOWN, 20375.4, YES, 3, NO, NO, YES, NO, NO
57, FEMALE, RURAL, 50576.3, YES, O, NO, YES, NO, NO, NO
57, FEMALE, TOWN, 37869.6, YES, 2, NO, YES, YES, NO, YES
51, FEMALE, INNER_CITY, 16525.4, YES, 8, YES, YES, YES, NO, NO
23, FEMALE, TOWN, 20375.4, YES, 3, NO, NO, YES, NO, NO
57, FEMALE, RURAL, 50576.3, YES, 0, NO, YES, NO, NO, NO
57, FEMALE, TOWN, 37869.6, YES, 2, NO, YES, YES, NO, YES
```

Step2: Open the software Weka and click on Explorer

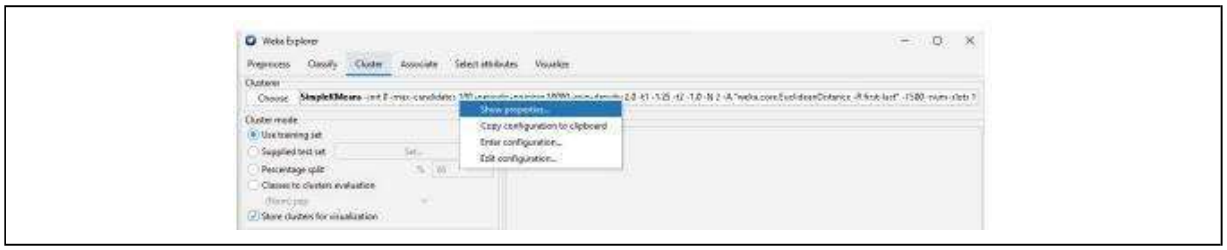
Step3: Open file bankdata.arff in Weka Explorer.



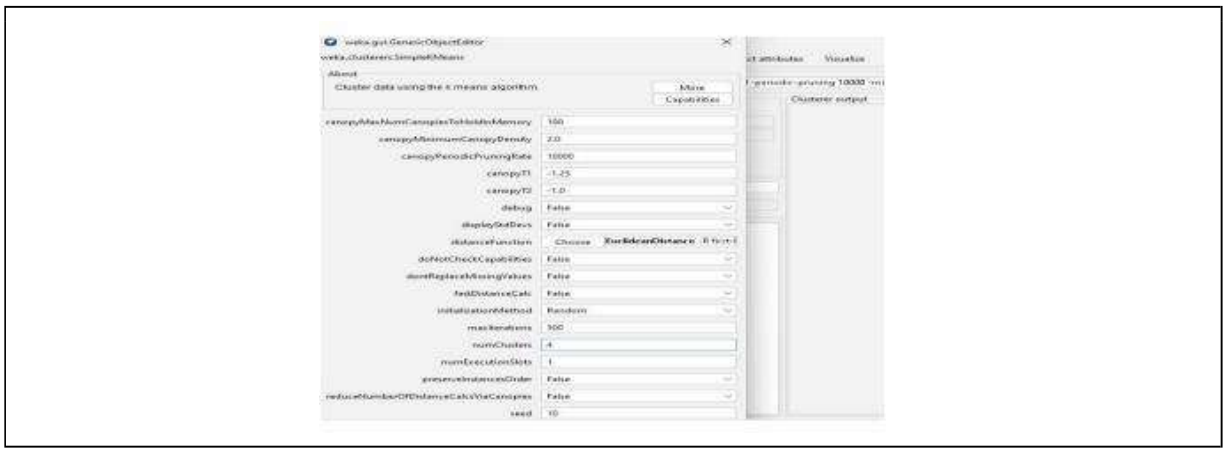
Step4: Go to cluster and choose SimpleKMeans



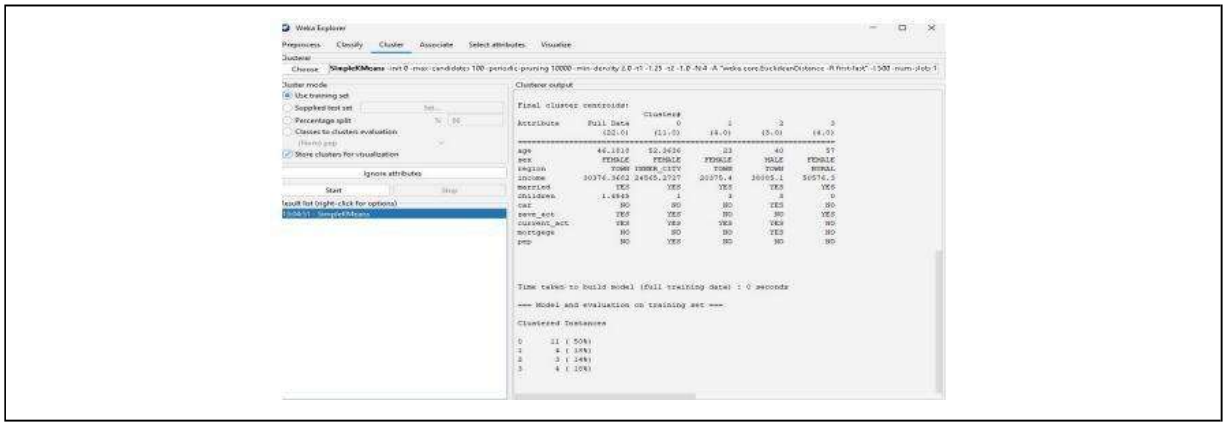
Step5: Right click on cluster and click show properties



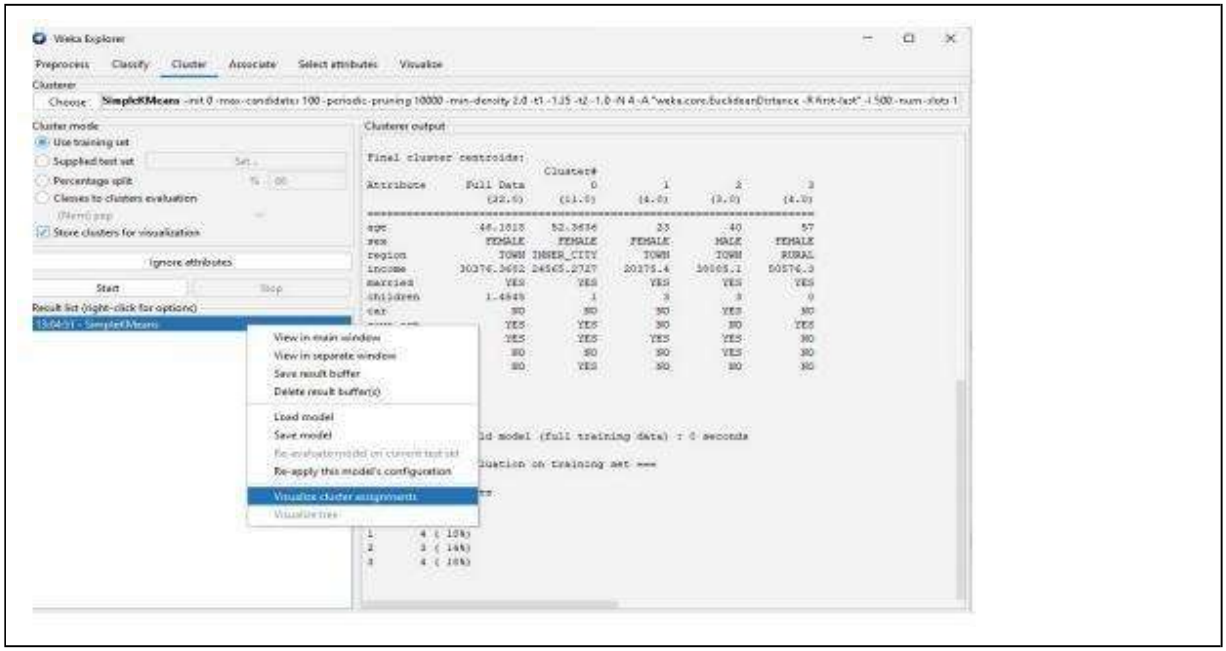
Step 6: Change property numcluster to 4



Step 7: Start then You can see SimpleKMeans output



Step 8: After clustering is done, right click on result list>click on visualize assignments



OUTPUT: