Assignment 5: Synthesis

For this assignment, you will use the MarketBasket.arff file to run several methods. Read the outputs, determine the output meaning, and compare the results.

A. Use the decision tree method, J48 algorithm, and use all the subjects (10 cases) as the whole training set.

Questions
1.   What is the rate of correctly classified instances?
2.   What does the final tree look like? Draw the decision tree.

B. Use the same data file, but use MultilayerPerceptron method in the Classify →functions path.

Questions
1.   What is the rate of correctly classified instances?
2.   What does the neural network look like? Draw the network, and put the weight on the edge. Use two decimal points for accuracy.

C.   With the same data set, run the association rule using the Apriori method with the default parameter setting.

Questions
1.   What is the minimum support (minSup) value?
2.   What is the minConf value?
3.   What are the association rules? Please give two examples, such as: If no beverage but lives in urban, then buy fruit.

D. Summarize your analysis.

Questions
1.   What is your observation when comparing decision trees with neural nets?
2.   What is your observation when comparing decision trees with association rules?
3.   Compare neural net and association, and then describe your analysis.