B.Maheshwar(192411195)

Day3-Data Mining Experiments

Experiment 1: Apriori and FP-Growth Algorithm

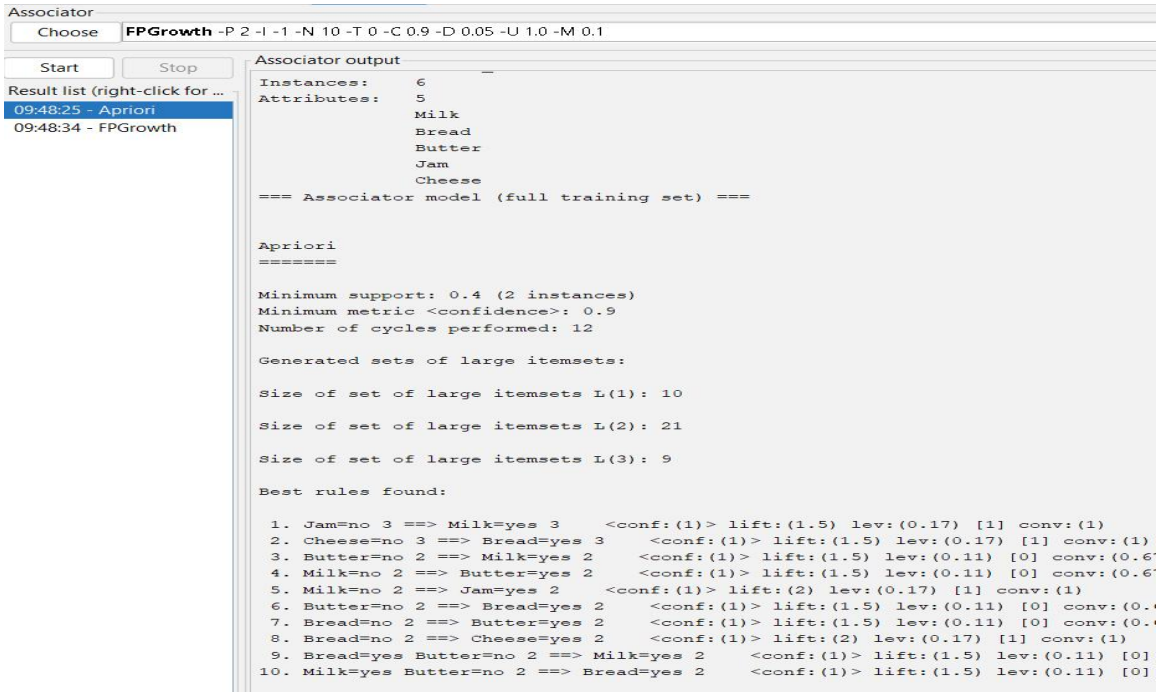
Aim:

To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:

Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5: Interpret the outcome.

Output:




```
=== Run information ===

Scheme:       weka.associations.FPGrowth -P 2 -I -1 -N 10 -T 0 -C 0.9 -D 0.05 -U
Relation:     market_basket
Instances:    6
Attributes:   5
              Milk
              Bread
              Butter
              Jam
              Cheese
=== Associator model (full training set) ===
```

Experiment 2: Association Rule Analysis

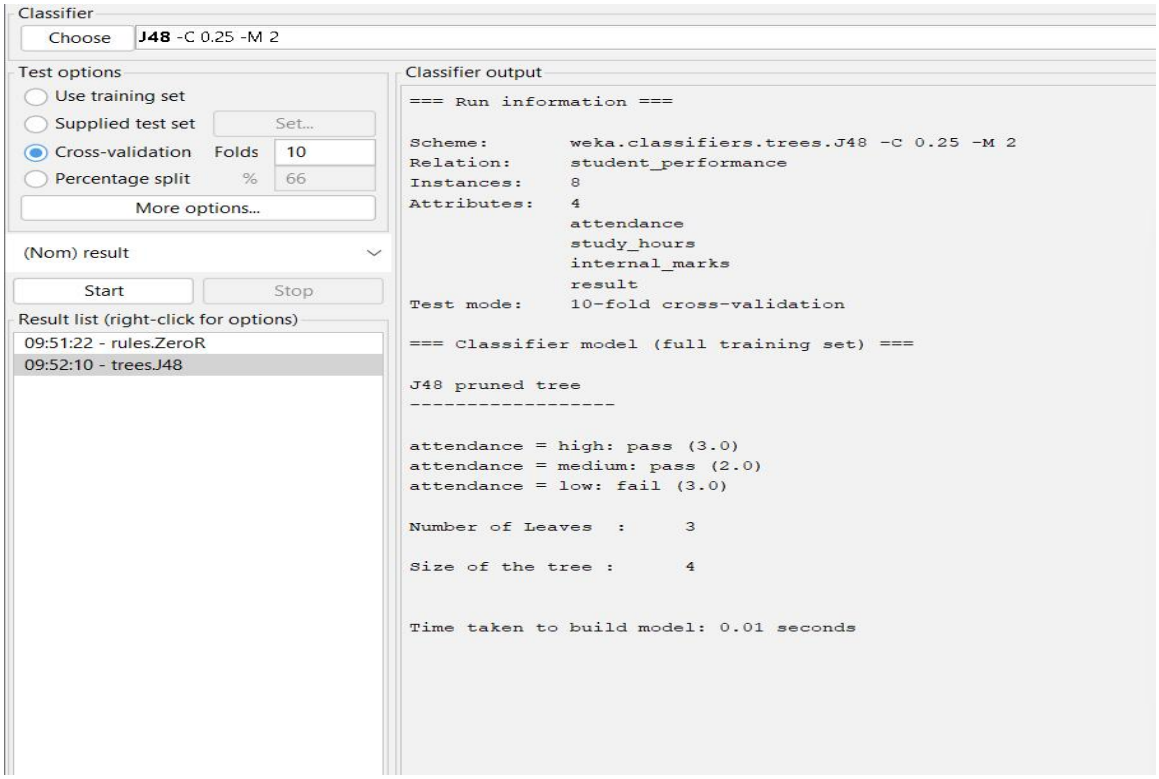
Aim:

To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:

Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5: Interpret the outcome.

Output:



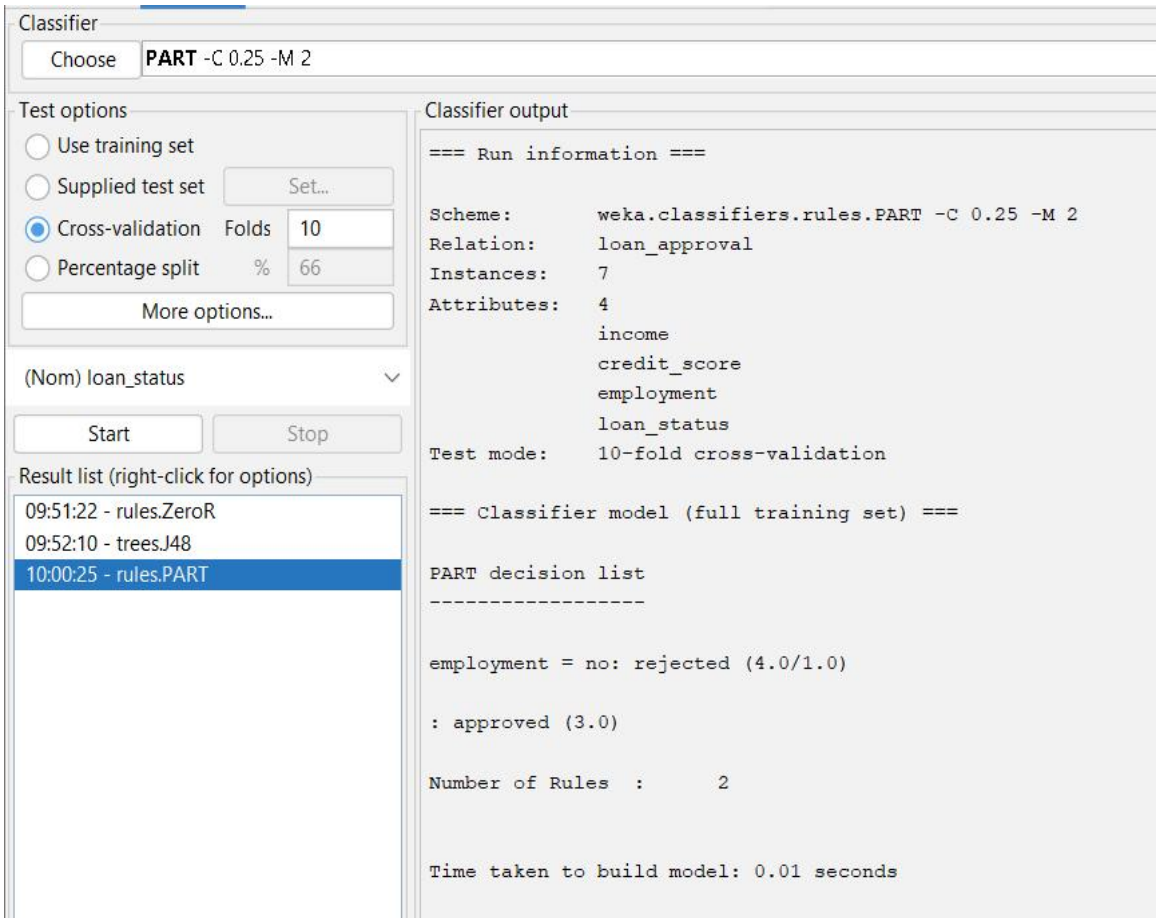
Experiment 3: Bayes Classification and Decision Tree

Aim:
To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:

Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5: Interpret the outcome.

Output:



Experiment 4: Diabetes Dataset Analysis using Regression

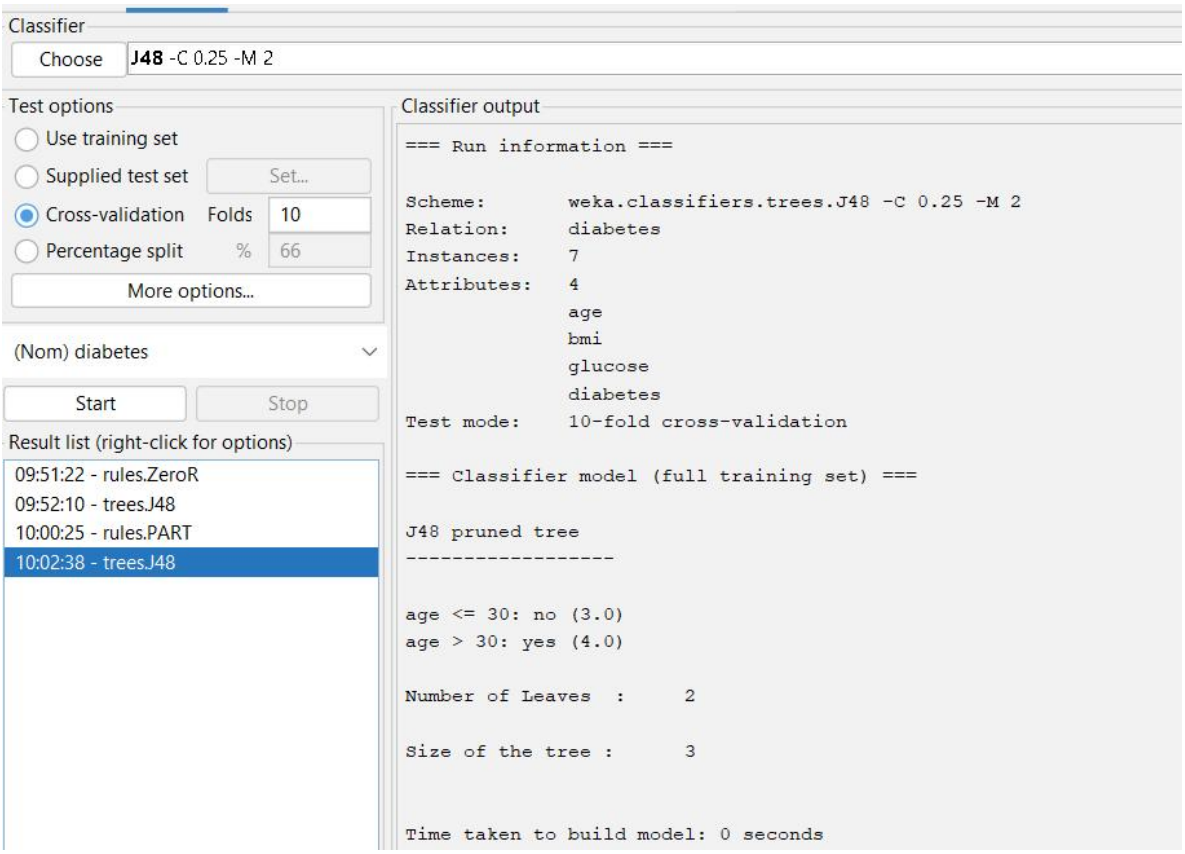
Aim:

To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:

Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5: Interpret the outcome.

Output:



Experiment 5: WEKA Implementation (Apriori & FP-Growth)

Aim:
To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:

Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5:Interprettheoutcome.

Output:

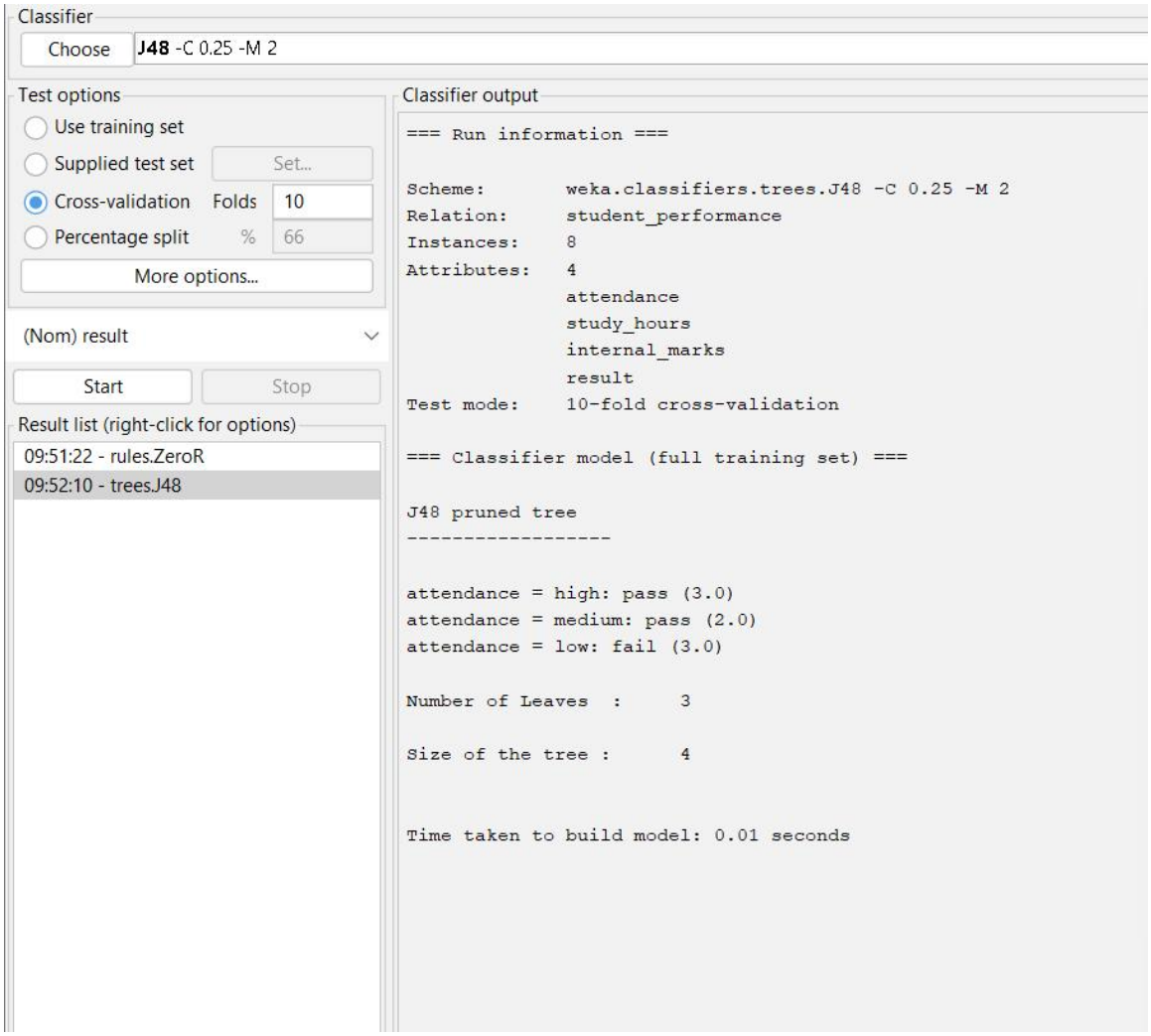
```
=== Run information ===

Scheme:       weka.associations.Apriori -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0
Relation:     apriori_lab
Instances:    5
Attributes:   6
              M
              O
              N
              K
              E
              Y
=== Associator model (full training set) ===


Apriori
=======

Minimum support: 0.5 (2 instances)
Minimum metric <confidence>: 0.9
Number of cycles performed: 10

Generated sets of large itemsets:

Size of set of large itemsets L(1): 10

Size of set of large itemsets L(2): 24

Size of set of large itemsets L(3): 19

Size of set of large itemsets L(4): 7

Size of set of large itemsets L(5): 1

Best rules found:

 1. E=1 4 ==> K=1 4    <conf:(1)> lift:(1.25) lev:(0.16) [0] conv:(0.8)
 2. K=1 4 ==> E=1 4    <conf:(1)> lift:(1.25) lev:(0.16) [0] conv:(0.8)
 3. O=1 3 ==> K=1 3    <conf:(1)> lift:(1.25) lev:(0.12) [0] conv:(0.6)
```

Experiment 6: Decision Tree Prediction using WEKA

Aim:
To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:
Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5: Interpret the outcome.

Output:



Experiment 7: ARFF Dataset Creation and Rule Generation

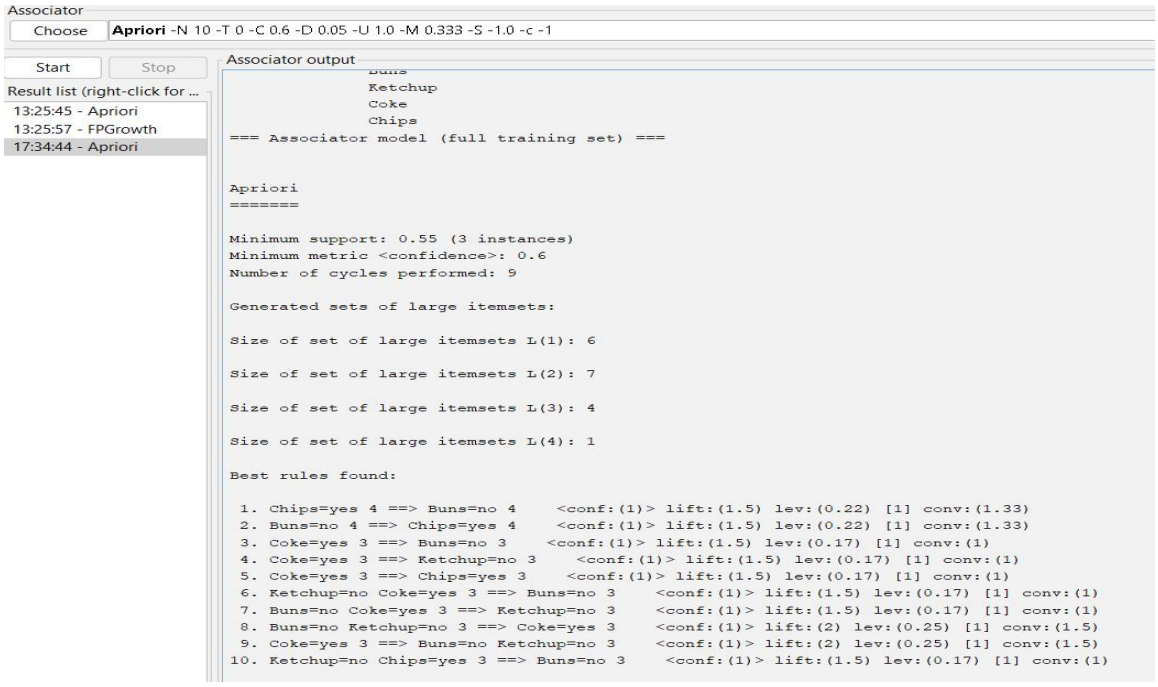
Aim:

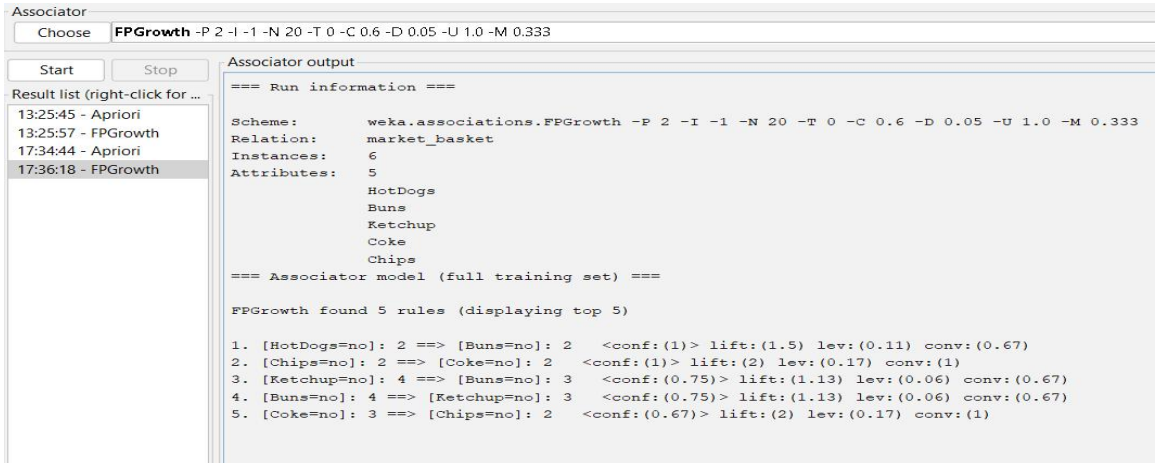
To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:

Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5: Interpret the outcome.

Output:





Experiment 8: Rule-based vs Decision Tree Classification

Aim:
To implement and analyze the given data mining technique using appropriate datasets.

Algorithm:
Step 1: Load the dataset.
Step 2: Preprocess the data.
Step 3: Apply the specified algorithm.
Step 4: Analyze the results.
Step 5: Interpret the outcome.

Output: