

Assignment 8: Decision Tree by Vishal Doshi (vdoshi3@uic.edu)

NOTE: Make sure there is a input file: "dataset.txt" in the root folder

Steps:

1. Extract and Import "DecisionTreeJava.zip" into Eclipse.
2. Run the DesisionTreeJava.java

Results:

```
=====Test Report=====
Total Predictions carried out:14
Number of Correct Predictions: 12
The accuracy is: 85.71428571428571%
=====Decision Tree=====
playtennis(Root)
|      outlook(sunny)
|      |      humidity(high)
|      |      |      =>no
|      |      |      humidity(normal)
|      |      |      =>yes
|      |      outlook(overcast)
|      |      |      =>yes
|      |      outlook(rain)
|      |      |      wind(weak)
|      |      |      |      =>yes
|      |      |      |      wind(strong)
|      |      |      |      |      =>no
```

Implementation Details:

DesisionTreeJava.java: The class where everything is happening.

Entropy.java: the method to calculate Entropy resides here.

Node.java: The node class of the tree

Attribute.java: The class to compose one attribute

Record.java: The class that has list of attribute. This class object represents a row in a the dataset.