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HW5B - Decision Tree Write-up

1.) I used “less than or equal to” when finding a threshold for an attribute. So any ties ended up putting the number in the “less than” list.
2.) My stopping criteria was if 95% of the data belonged to one class I would stop. I did not have to hard code this.
3.)

```
if (float(item[1]) <= 7.87):
        if (float(item[3]) <= 5.01):
                output.write( str(1)+"\n")
        else:
                if (float(item[1]) <= 4.94):
                        output.write( str(0)+"\n")
                else:
                        output.write( str(1)+"\n")
else:
        output.write( str(0)+"\n")
```

4.) 100%
5.) My program actually created the classifier program.
6.) The most difficult part for me was not writing a program to write a program (although that was difficult). The hardest part was wrapping my head around how I was supposed to programmatically create the decision tree. It took me a while to understand what it was I was doing. I started to work backwards, from finding the best threshold for one attribute, to finding the best threshold out of all the best thresholds, to using that threshold to split all of the data into two lists and finally recursively calling the function on the two lists.