ID3 Algorithm

For my implementation I tried to make it as efficient as possible by not using Array Lists The first step to my algorithm was to create condition probabilities decimals for each of the string examples. I did this by calculating the number of times an example appeared in the string multiplied by the number of times that example appeared and it was classified as “Yes” so for the test set {Animal type, dog, cat, goldfish, Size, large, large, small, (class) Bites, yes, yes, no }. In this set the first field (dog) (Size) 2/3 x 1/3 then to make it easier to choose an attribute I stored the best condition probability per attribute for each attribute. In the training of the set for each attribute class I got the attribute index and the string example form the conditional probabilities and each field that had that attribute example equal to the string example I found was put into a new set. Tree node structure was especially challenging I tried to assign all the children of each tree node to a recursive treenode that would stop at a leaf which was split from the tree.