# DECISION TREES

* An important way of classifying or categorizing data
* Ex) Akinator uses decision trees
* Decision trees use entropy for separating data
* Homogenity and knowledge are inversely proportional to entropy.
* Entropy = -()) ,where Pi is the probability of an event and n is the total number of events.Default logarithmic base is base 2.
* Information gain = Entropy of parent(usually 1) – Entropy of children(usually avg)
* We should divide on the attribute which gives us the most information gain.
* Hyperparameters- a tree of maximum length ‘k’ has 2^k leaves,minimum number of samples per split,maximum number of features,