

Q1 – Implement a simple Decision Tree using Gini impurity and Information gain on a simple dataset for classification

Label	Weight	Height	Number of legs	Class (biology)
Cat	5	10	4	Mammalia
Dog	10	15	4	Mammalia
Snake	2	3	0	Reptilia
Cat	6	12	4	Mammalia
Dog	12	18	4	Mammalia
Snake	1	2	0	Reptilia
Cat	4	8	4	Mammalia
Dog	8	14	4	Mammalia
Snake	3	5	0	Reptilia
Cat	7	14	4	Mammalia

Compute the information gain if we split on Class (biology) == "Mammalia"