

Tugas Pertemuan 7

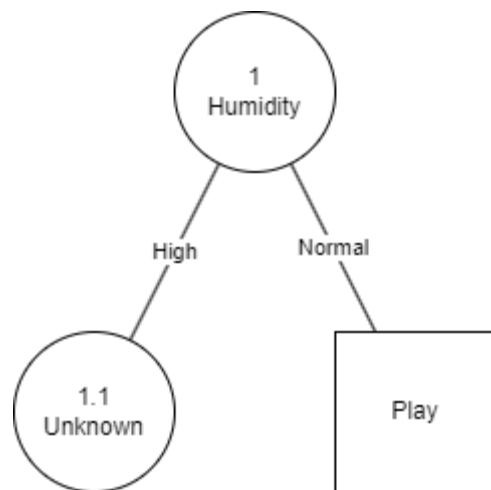
1. Menghitung Entropy dan Gain serta menentukan Decision Tree dari kasus dibawah:

Outlook	Temperature	Humidity	Windy	Play
Sunny	Hot	High	No	Don't Play
Sunny	Hot	High	Yes	Don't Play
Cloudy	Hot	High	No	Play
Rainy	Mild	High	No	Play
Rainy	Cool	Normal	No	Play
Rainy	Cool	Normal	Yes	Play
Cloudy	Cool	Normal	Yes	Play
Sunny	Mild	High	No	Don't Play
Sunny	Cool	Normal	No	Play
Rainy	Mild	Normal	No	Play
Sunny	Mild	Normal	Yes	Play
Cloudy	Mild	High	Yes	Play
Cloudy	Hot	Normal	No	Play
Rainy	Mild	High	Yes	Don't Play

*Node 1

Total		Jumlah Kasus (S)	Don't Play (S1)	Play (S2)	Entropy	Gain
		14	4	10	0.8631	
Outlook	Sunny	5	3	2	0.9709	0.2585
	Cloudy	4	0	4	0	
	Rainy	5	1	4	0.7219	
Temperature	Hot	4	2	2	1	0.1838
	Mild	6	2	4	0.9182	
	Cool	4	0	4	0	
Humidity	High	7	4	3	0.9852	0.3705
	Normal	7	0	7	0	
Windy	No	8	2	6	0.8112	0.006
	Yes	6	2	4	0.9182	

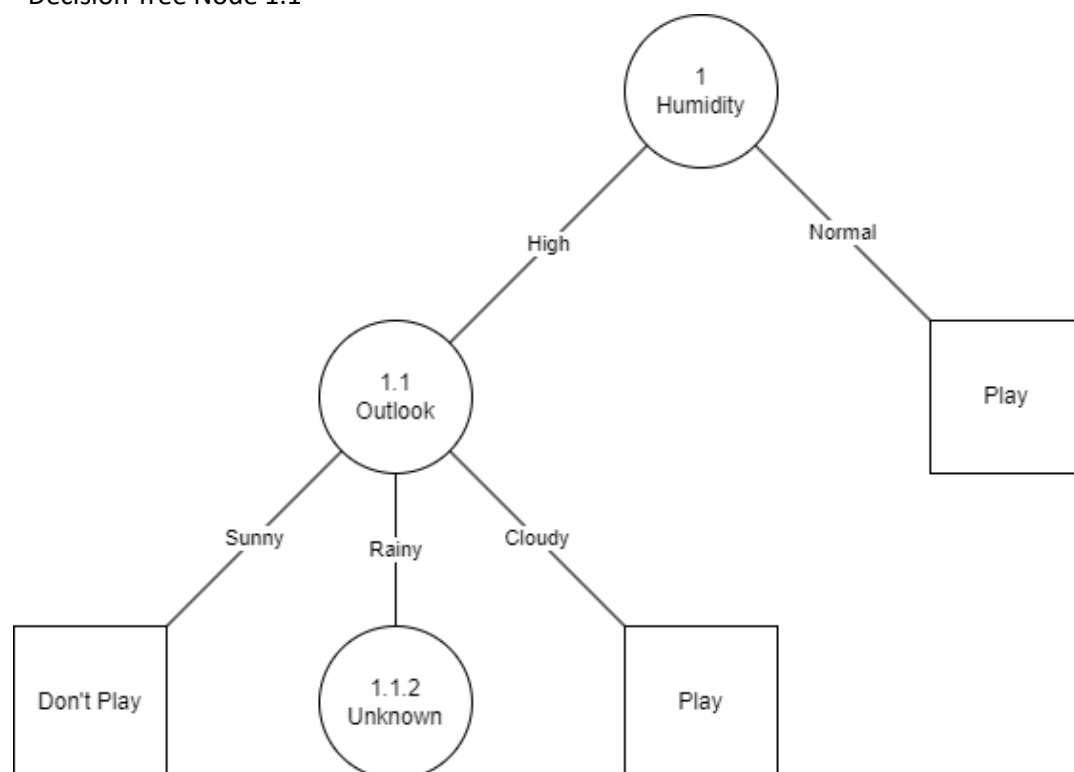
*Decision Tree Node 1



*Node 1.1

		Jumlah Kasus (S)	Don't Play (S1)	Play (S2)	Entropy	Gain
Humidity High		7	4	3	0.9852	
Outlook	Sunny	3	3	0	0	0.6994
	Cloudy	2	0	2	0	
	Rainy	2	1	1	1	
Temperature	Hot	3	2	1	0.9182	0.0202
	Mild	4	2	2	1	
	Cool	0	0	0	0	
Windy	No	4	2	2	1	0.0202
	Yes	3	2	1	0.9182	

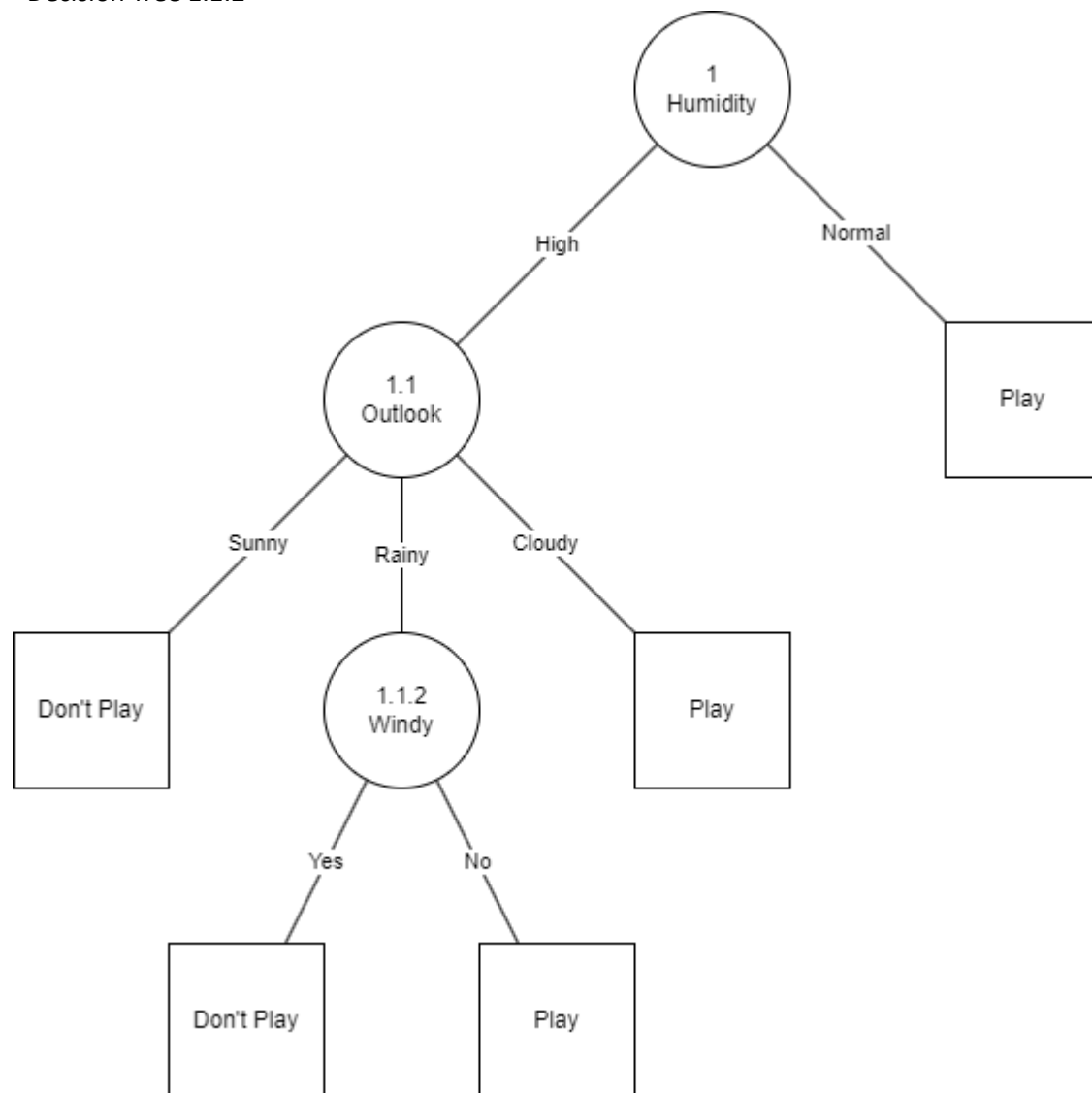
*Decision Tree Node 1.1



*Node 1.1.2

		Jumlah Kasus (S)	Don't Play (S1)	Play (S2)	Entropy	Gain
Humidity High and Outlook Rainy		2	1	1	1	
Temperature	Hot	0	0	0	0	0
	Mild	2	1	1	1	
	Cool	0	0	0	0	
Windy	No	1	0	1	0	1
	Yes	1	1	0	0	

*Decision Tree 1.1.2



2. Link GitHub program python Decision Tree

https://github.com/weztcy/Semester-4/blob/main/Data%20Mining/7%20-%20Klasifikasi%20dengan%20Decision%20Tree/Decision_Tree.ipynb