NEW YORK INSTITUTE OF TECHNOLOGY
College of Engineering and Computing Sciences
Statistics for Data Science (Fall 2022)
Worksheet for ID3 Decision Tree Classification

Day	Outlook	Temp.	Humidity	Wind	Decision
1	Sunny	Hot	High	False	N
2	Sunny	Hot	High	True	N
3	Overcast	Hot	High	False	P
4	Rain	Mild	High	False	P
5	Rain	Cool	Normal	False	P
6	Rain	Cool	Normal	True	N
7	Overcast	Cool	Normal	True	P
8	Sunny	Mild	High	False	N
9	Sunny	Cool	Normal	False	P
10	Rain	Mild	Normal	False	P
11	Sunny	Mild	Normal	True	P
12	Overcast	Mild	High	True	P
13	Overcast	Hot	Normal	False	P
14	Rain	Mild	High	True	N

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                        ┌─────────┐
                        │ outlook │
                        └─────────┘
              sunny       overcast      rain

         ┌──────────┐         ┌┈┐              ┌───────┐
         │ humidity │         ┊P┊              │ windy │
         └──────────┘         └┈┘              └───────┘
        high    normal                        true      false

      ┌┈┐            ┌┈┐              ┌┈┐                 ┌┈┐
      ┊N┊            ┊P┊              ┊N┊                 ┊P┊
      └┈┘            └┈┘              └┈┘                 └┈┘
```