Decision trees

1. Weather Prediction

Problem: Predict whether a person will play a sport based on weather conditions.
Dataset Example:

Day	Outlook	Temperature	Humidity	Wind	PlaySport
Day 1	Sunny	Hot	High	Weak	No
Day 2	Sunny	Hot	High	Strong	No
Day 3	Overcast	Mild	High	Weak	Yes
Day 4	Rainy	Cool	Normal	Weak	Yes
Day 5	Rainy	Cool	Normal	Strong	No
Day 6	Overcast	Cool	Normal	Strong	Yes

2. Loan Approval

Problem: Predict whether a loan application will be approved.
Dataset Example:

Applicant	Income	Credit Score	Age	Loan Approved
A	High	Excellent	25	Yes
B	Low	Poor	45	No
C	Medium	Fair	35	Yes

D	Medium	Excellent	30	Yes
E	High	Poor	28	No
F	Low	Fair	50	No

3. Disease Diagnosis

Problem: Predict whether a patient has a disease based on symptoms.
Dataset Example:

Patient	Fever	Cough	Fatigue	Age	Disease
P1	Yes	Yes	Yes	30	Yes
P2	No	Yes	No	40	No
P3	Yes	No	Yes	50	No
P4	No	Yes	Yes	35	Yes
P5	Yes	Yes	No	45	Yes
P6	No	No	No	25	No

4. Customer Churn

Problem: Predict whether a customer will churn based on their subscription details.
Dataset Example:

Customer	Tenure	MonthlyCharges	ContractType	Churn
C1	5	70	Month-to-Month	Yes
C2	15	80	Two-Year	No
C3	2	60	Month-to-Month	Yes
C4	20	90	One-Year	No
C5	10	75	One-Year	No
C6	1	50	Month-to-Month	Yes

5. Exam Performance

Problem: Predict whether a student will pass an exam based on study habits.
Dataset Example:

Student	Study Hours	Attendance	Sleep Hours	Pass
S1	5	80%	6	Yes
S2	2	50%	4	No
S3	4	70%	5	Yes
S4	1	40%	3	No
S5	3	90%	8	Yes
S6	2	60%	4	No