Imagine you work for a bank and you want to predict whether a loan applicant will default on their loan or not based on some demographic and financial data. Here is a sample dataset containing 10 loan applicants and whether they defaulted on their loan or not:

Applicant ID	Age	Income	Education Level	Defaulted
1	20-29	<20000	High School	No
2	30-39	20001-39999	Bachelor's	No
3	20-29	20001-39999	~~Master's~~ Bachelor's	No
4	30-39	60000-80000	~~High School~~ Master's	No
5	40-49	<20000	~~Bachelor's~~ High School	Yes
6	30-39	40000-59999	~~Master's~~ Bachelor's	No
7	20-29	40000-59999	~~High School~~ Master's	Yes
8	40-49	60000-80000	~~Bachelor's~~ Bachelor's	No
9	20-29	<20000	~~Bachelor's~~ High School	No
10	30-39	20001-39999	~~High School~~ Master's	Yes
11	30-39	40000-59999	Bachelor's	

P(Defaulted | age 30-39, Income = 40,000 - 59,999, Education level = Bachelor's)

Prior → P(Defaulted = yes) = $\frac{3}{10}$

P(Defaulted = No) = $\frac{7}{10}$

P(age 30-39, Income = 40,000 - 59,999, Education level = Bachelor's)

$\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$

$P(X|C_i)$: P(X | Defaulted = "yes") = $\frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} = 0.037$

$= 0.037 \propto 0.30 = 0.011$

P(age = 30-39 | no) $\propto$ (income = 40,000 - 59,999 | No) $\propto$ (Education > Bachelor's | no)

$\frac{3}{7}$ $\frac{1}{7}$ $\frac{3}{7}$

$= \frac{3}{7} \propto \frac{1}{7} \propto \frac{3}{7} = 0.49$

$= 0.49 \propto 0.7 = 0.34$

ดังนั้น no มีความน่าจะเป็นที่จะ yes