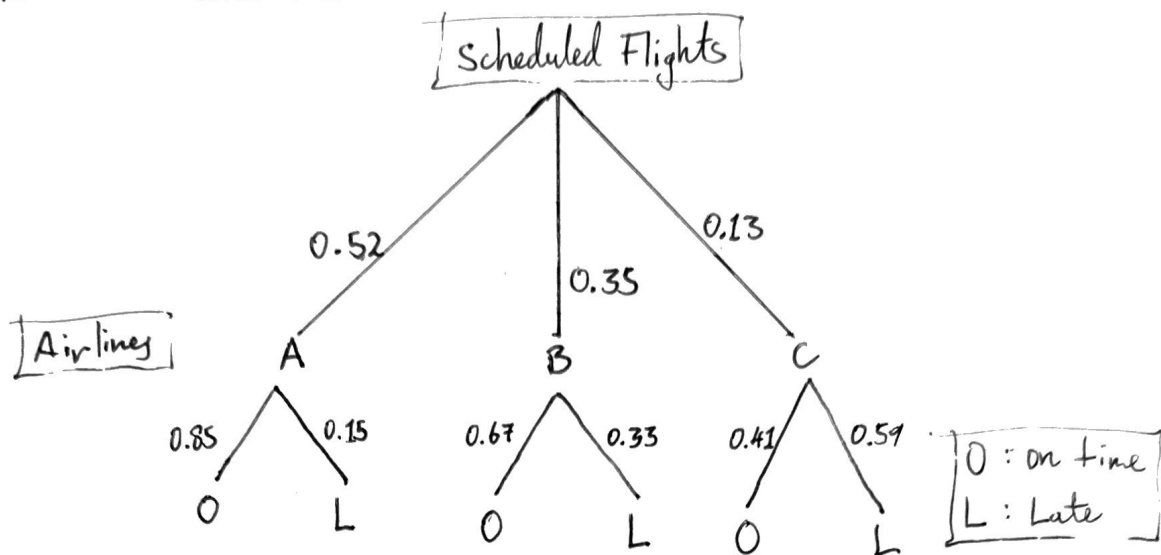


# Homework 6 - Problem 1



$$\begin{aligned}
 P(A|O) &= \frac{P(O|A)P(A)}{P(O|A) \cdot P(A) + P(O|A^c) \cdot P(A^c)} \\
 &= \frac{(0.85)(0.52)}{(0.85)(0.52) + (0.67)(0.35) + (0.41)(0.13)} \\
 &= \frac{0.442}{0.442 + 0.2345 + 0.0533} \\
 &= \frac{0.442}{0.7298} = 0.60565
 \end{aligned}$$

$\Rightarrow$  60.565% probability that  
 an on-time flight was operated  
 by airline A