

$$A: \Omega = \{MT, MT^c, M^cT, M^cT^c\}$$

$$P(M) = 0.7$$

$$P(M^cT) = 0.8 - 0.6 = 0.2$$

$$A = \{MT, M^cT\}$$

$$P(T) = 0.8$$

$$P(M^cT^c) = 1 - (0.8 + 0.7 - 0.6) = 0.1$$

$$F = \{M^cT, M^cT^c\}$$

$$P(MT) = 0.6$$

$$\therefore P(A|F) = \frac{P(A \cap F)}{P(F)}$$

$$= \frac{P(\{M^cT\})}{P(\{M^cT\}) + P(\{M^cT^c\})}$$

$$= \frac{0.2}{0.2 + 0.1}$$

$$= \frac{2}{3}$$

\therefore The probability that Alice shows up to Thursday tutorial given that she wasn't in class on Monday is $\frac{2}{3}$.