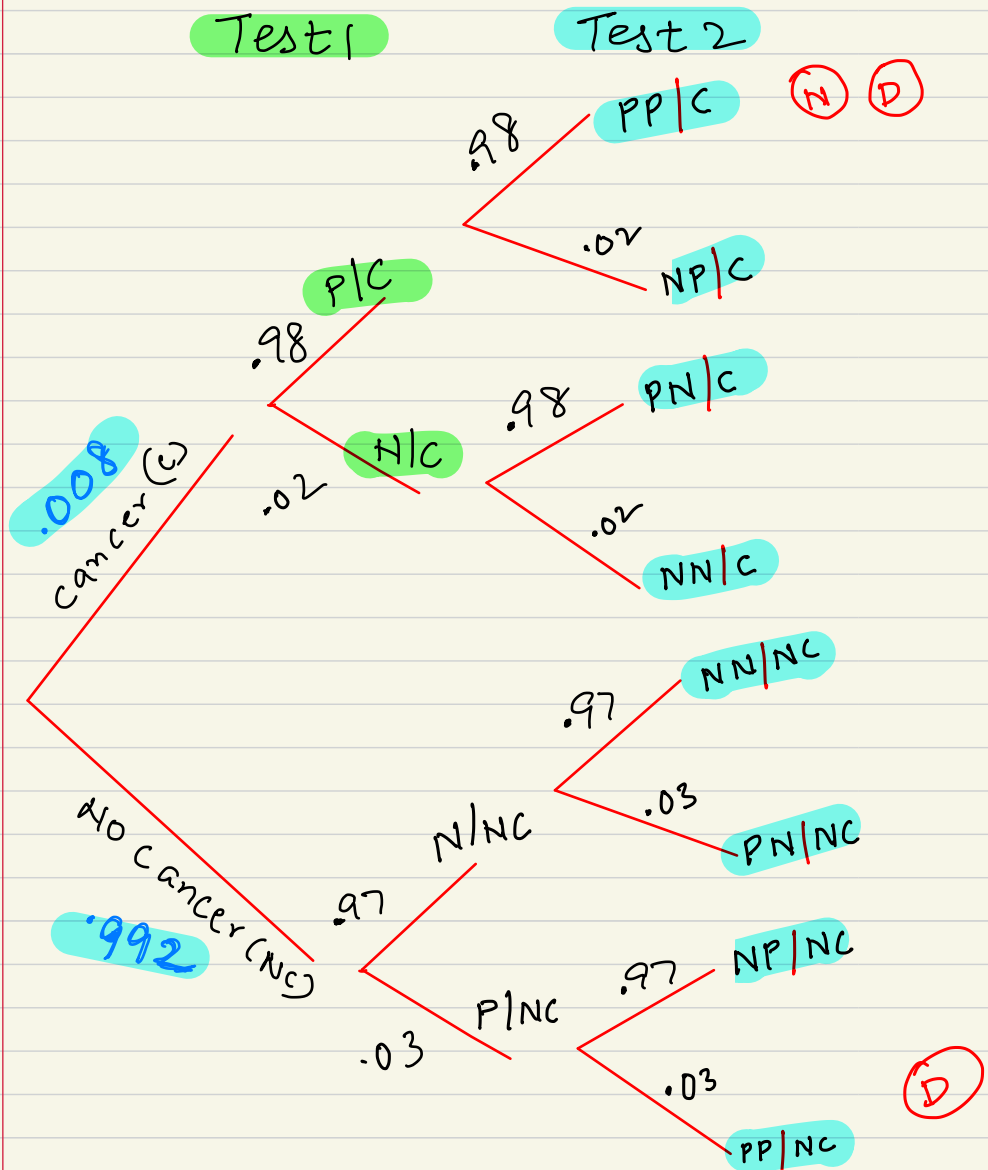
Assignment-2

14/Mar/2020



$P(C \mid PP) = ?$

$P(NC \mid PP)$

a) $P(C|PP) = \dfrac{P(PP|C) \times P(C)}{P(PP)}$

$= \dfrac{.98 \times .98 \times .008}{(.98 \times .98 \times .008) + (.03 \times .03 \times .992)}$

$= \dfrac{.0077}{.0077 + .0009} = \dfrac{.0077}{0.0086} = 89.53\%$

b) $P(HC|PP) = \dfrac{P(PP|NC) \times P(NC)}{P(PP)}$

$= \dfrac{.03 \times .03 \times .992}{(.98 \times .98 \times .008) + (.03 \times .03 \times .992)}$

$= \dfrac{.0009}{.0086} = 0.104 = 10.4\%$