Assignment 3

## Fundamentals of Data Analytics

Sandeep Mandalapu

S ID:-11527195

**Problem:10% of patients in a clinic have liver disease. Five percent of the clinic’s patients are alcoholics. Amongst those patients diagnosed with liver disease, 7% are alcoholics. You are interested in knowing the probability of a patient having liver disease, given that he is an alcoholic.**

P(A) = probability of liver disease .

= 10%

=0.10

P(B) = probability of alcoholism .

= 5%

=0.05

P(B|A) = probability that the patient is alcoholics.

=7%

=0.07

P(A|B) = ?.??(probability of patients having liver disease).

P(A│B)=  (P(B│A)×P(A)/P(B)

=(0.07\*0.1)/0.05

=0.14

Probability of patient is an alcoholic, their chances of having the liver disease is 14%.

**THANK YOU**