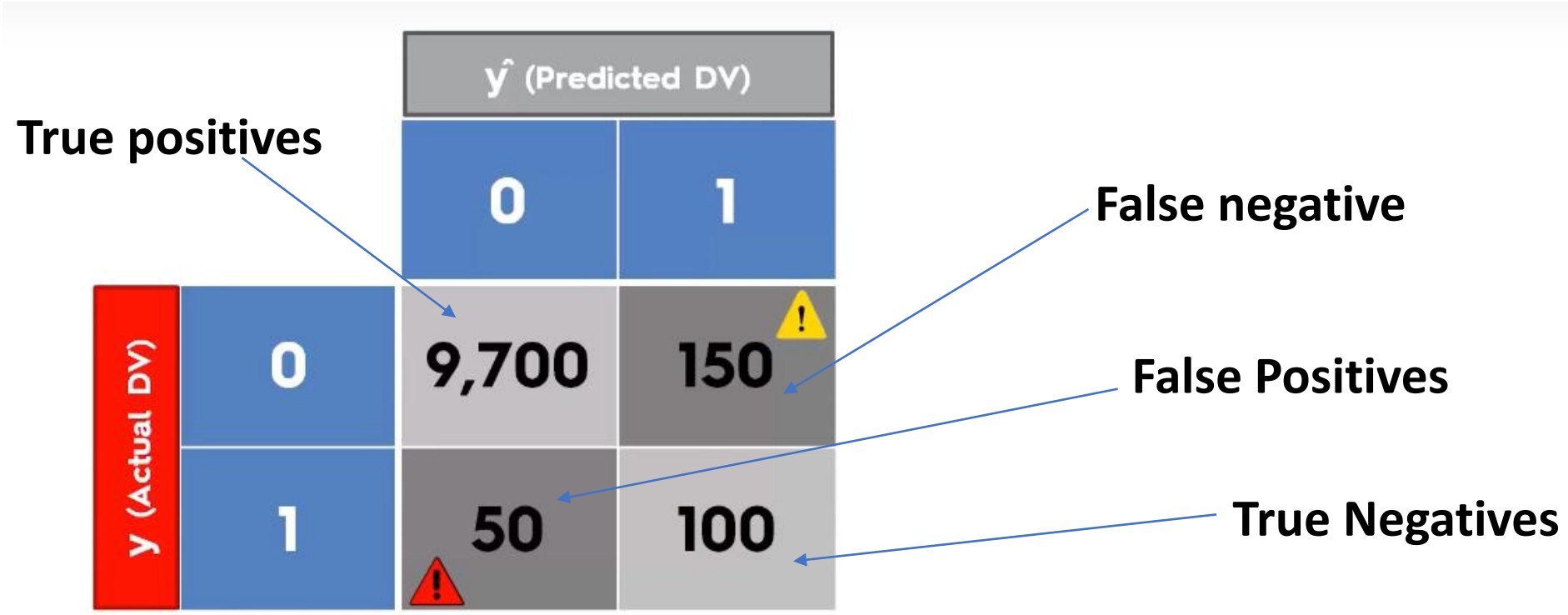
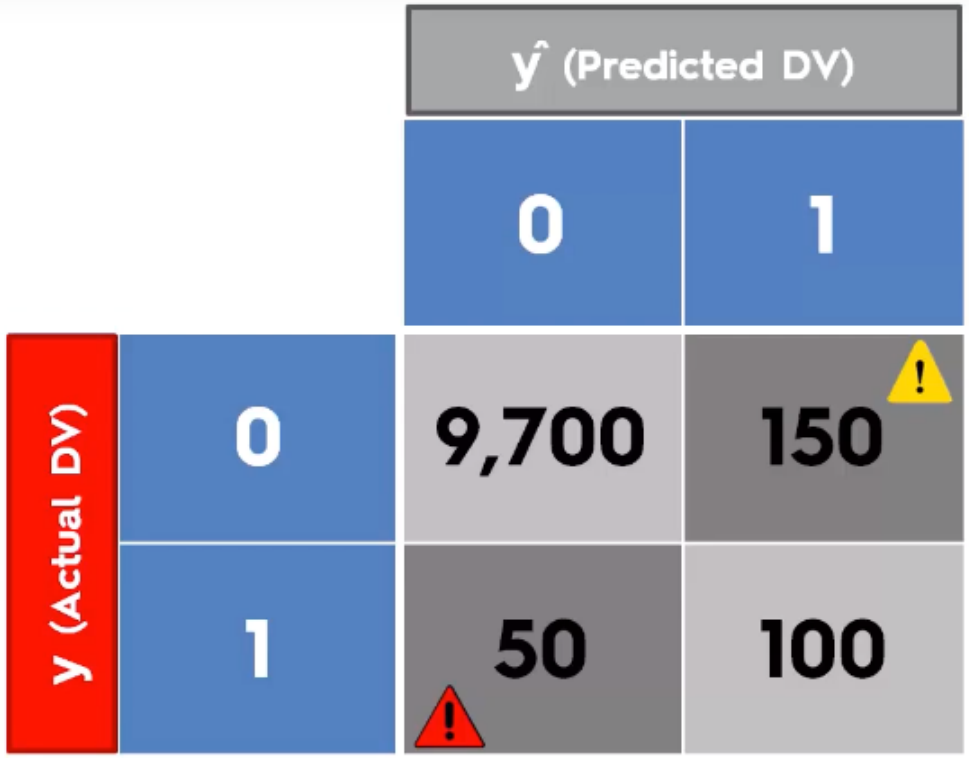
Accuracy Paradox

Confusion Matrix



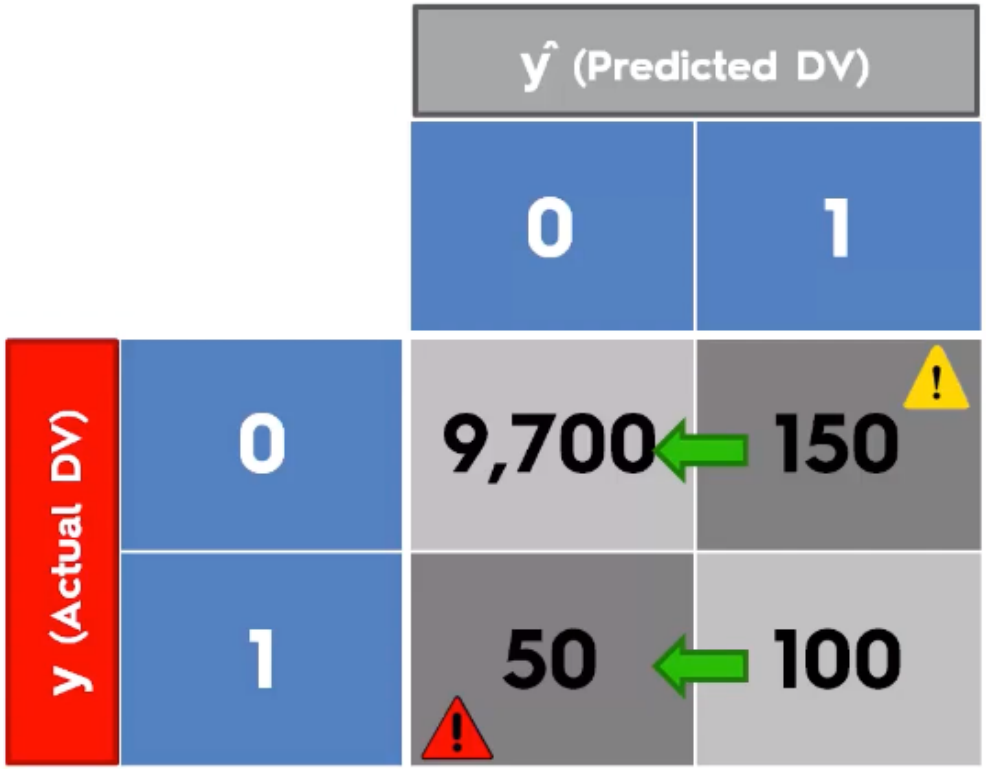


Scenario 1:

Accuracy Rate = Correct / Total
AR = 9,800/10,000 = 98%

***This is a confusion matrix when we Are using a machine learning model.**

We can calculate the accuracy and the error Rates using the TP, TN, FP and FN.

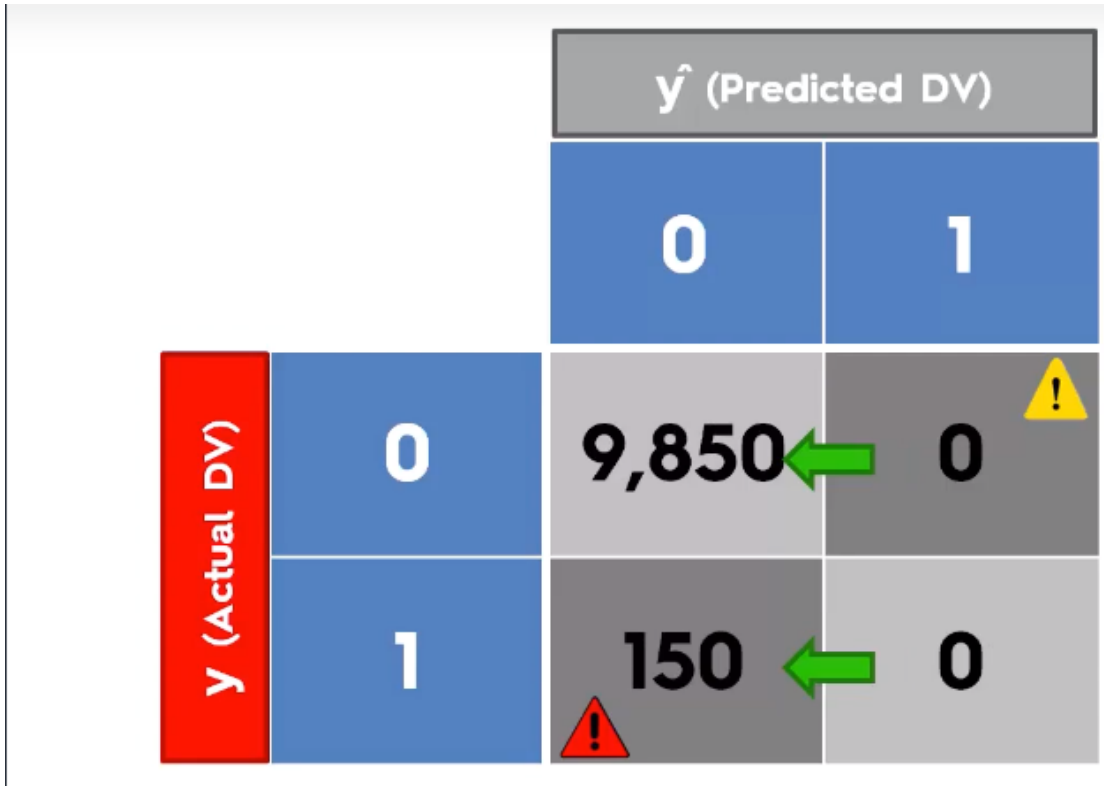


Scenario 1:

Accuracy Rate = Correct / Total
AR = 9,800/10,000 = 98%

***Let's assume we decide to not use a model**
And hence we would predict everything as a 0

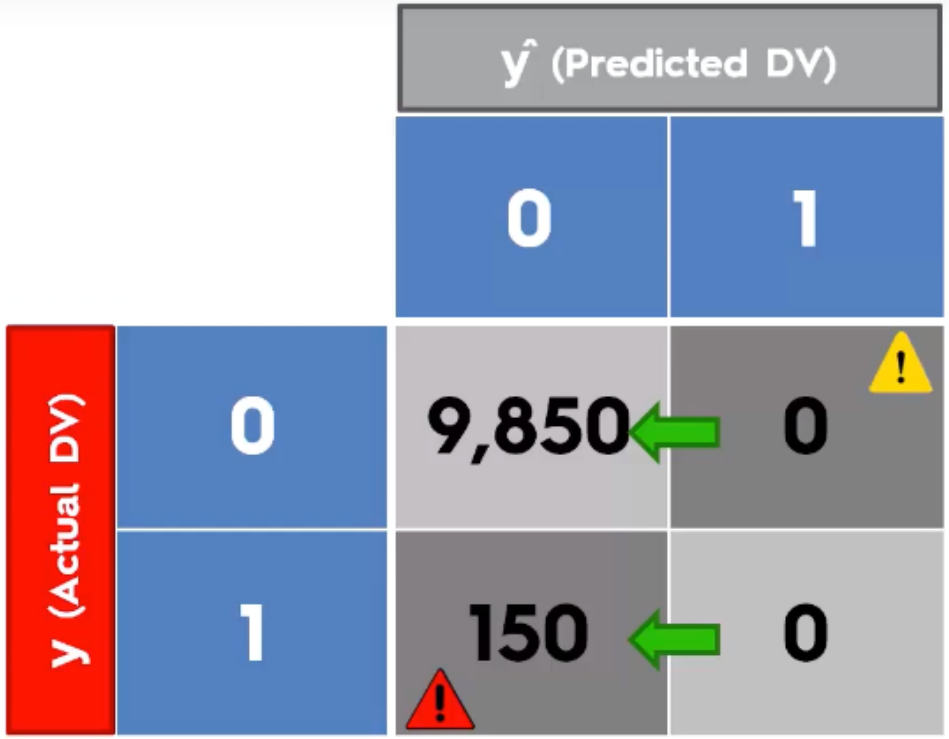
The new confusion matrix would look like this -



Scenario 1:

Accuracy Rate = Correct / Total
AR = 9,800/10,000 = 98%

The accuracy of scenario 1 is less than the accuracy of scenario 2, Whereas scenario 2 did not even use a model.

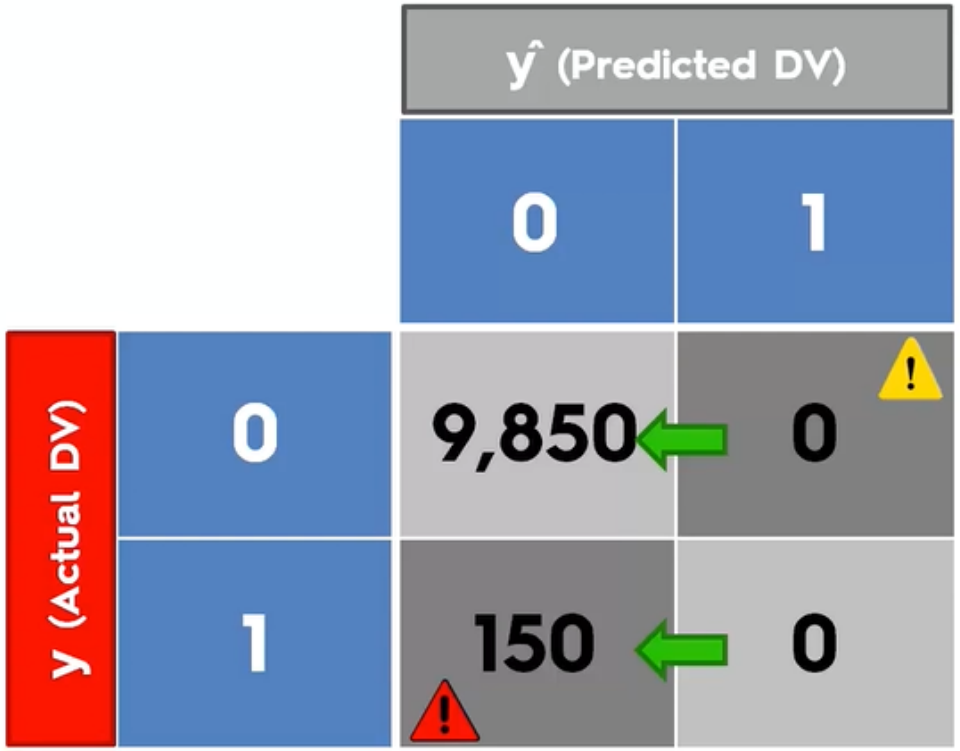


Scenario 1:

Accuracy Rate = Correct / Total
AR = 9,800/10,000 = 98%

Scenario 2:

Accuracy Rate = Correct / Total
AR = 9,850/10,000 = 98.5%



Scenario 1:

Accuracy Rate = Correct / Total
AR = 9,800/10,000 = 98%

Scenario 2:

Accuracy Rate = Correct / Total
AR = 9,850/10,000 = 98.5%