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## Exercise 02: Binary Classification Confusion Matrix

Classification	True Value	Predicted Value
TN	0	0
TN	0	0
FP	0	1
TN	0	0
TN	0	0
TP	1	1
FN	1	0
FN	1	0
TP	1	1
TP	1	1

### Confusion Matrix

	$y_i = 1$	$y_i = 0$	
$\hat{y}_i = 1$	3 (TP)	1 (FP)	Precision 3/4 TP / (TP + FP)
$\hat{y}_i = 0$	2 (FN)	4 (TN)	
	Recall / Sensitivity 3/5 TP / (TP + FN)		Accuracy 7/10 (TP + TN) / Total

$$\text{Accuracy} = \frac{7}{10} = .7$$

$$\text{Precision} = \frac{3}{4} = .75$$

$$\text{Recall / Sensitivity} = \frac{3}{5} = .6$$