Exercise 2

$$\text{Precision} = \frac{\text{True Positives (TP)}}{\text{True positives (TP)} + \text{False positives (FP)}}$$

(TP) = (The num of car images retrieved by the system)

= 300

(FP) = (The num of non-car images retrieved by the sys)

= 50

$$\text{Precision} = \frac{300}{350} \approx 0.857 \Rightarrow 85.7\%$$

$$\text{Recall} = \frac{\text{True positives (TP)}}{\text{True positives (TP)} + \text{False Negatives (FN)}}$$

(TP) = 300

(FN) = (The num of car images that were not retreived)

= (Total car image) − (Retrieved car image)

= 500 − 300 = 200

$$\text{Recall} = \frac{300}{500} = \frac{3}{5} = 0.6 \Rightarrow 60\%$$

$$\therefore \quad \text{Precision} = 85.7\%$$
$$\text{Recall} = 60\%$$