Exercise 12

With the findings of:

```
Confusion Matrix:
 [[ 74  34]
 [138 531]]
Accuracy score: 0.7786357786357786
```

We can find that the true negatives is 74, and true positives is 531. This results in an accuracy score of 0.78.

In conclusion:

- The model is pretty accurate.
- We can notice that the there are significantly more false positives than false negatives. (even comparing ratios)
    - This means that data about public universities is much more coherent, while the alternative (private) is more diverse.
    - We could interpret that public universities tend to have similar qualities, while private universities can be very diverse in how they are.

Difficulties encountered:

While coding I noticed that the accuracy score was varying from ~0.8 and ~0.2. I'm assuming that this is because my code didn't exactly sort the labels. While my observations seem to be clear, it can be noted that if the random_state is in some specific states then it flips the accuracy. More info on it is in the code comments.