**George Brown College**

**Centre for Arts, Design and Information Technology**

**Machine Learning Process – using a decision trees model (Assignment 02)**

Please write a few features to define acceptable conditions for buying a car.

|  |  |  |  |
| --- | --- | --- | --- |
| Mileage | Year | Price | **Buy Y/N?** |
| 35K | 2018 | 24.8K | 1 (Yes, price is Ok) |
| 34K | 2018 | 23K | 1 |
| 48K | 2017 | 25K | 0 (No, price is too high) |
| 55K | 2017 | 24K | 0 |
| 57K | 2017 | 23K | 0 |
| 57 | 2018 | 23K | Prediction: [0] |
| 48K | 2019 | 24K | Prediction: [1] |

Please write a program to predict the condition for buying a car, based on the above-mentioned table, and predict a condition for a new record.

**from sklearn import tree**

**features=[[35,18,24.8], [34,18,23.0], [48,17,25.0], [55,17,24.0], [57,17,23.0]]**

**labels=[1,1,0,0,0]**

**clf=tree.DecisionTreeClassifier()**

**clf= clf.fit(features,labels)**

**print(clf.predict([[48,19,24.0]]))**