Importing Necessary Libraries

```python
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from scipy import stats
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier
from sklearn.metrics import classification_report
import sklearn.metrics
from sklearn.metrics import f1_score
```

```python
dataset = pd.read_csv('/content/training_sample.csv')
```

```python
dataset.head()
```

Out[ ]:

	UserID	basket_icon_click	basket_add_list	basket_add_detail	sort_by	image_picker	account_
0	a720-6b732349-a720-4862-bd21-644732	0	0	0	0	0	
1	a0c0-6b73247c-a0c0-4bd9-8baa-797356	0	0	0	0	0	
2	86a8-6b735c67-86a8-407b-ba24-333055	0	0	0	0	0	
3	6a3d-6b736346-6a3d-4085-934b-396834	0	0	0	0	0	
4	b74a-6b737717-b74a-45c3-8c6a-421140	0	1	0	1	0	

5 rows × 25 columns

- Data in all the columns are Nominal data

EDA - Exploratory Data Anlaysis

Understanding data

```
In [ ]:  dataset.columns
```

```
Out[ ]:  Index(['UserID', 'basket_icon_click', 'basket_add_list', 'basket_add_detail',
                'sort_by', 'image_picker', 'account_page_click', 'promo_banner_click',
                'detail_wishlist_add', 'list_size_dropdown', 'closed_minibasket_click',
                'checked_delivery_detail', 'checked_returns_detail', 'sign_in',
                'saw_checkout', 'saw_sizecharts', 'saw_delivery', 'saw_account_upgrade',
                'saw_homepage', 'device_mobile', 'device_computer', 'device_tablet',
                'returning_user', 'loc_uk', 'ordered'],
                dtype='object')
```

```
In [ ]:  dataset.describe()
```

Out[ ]:

	basket_icon_click	basket_add_list	basket_add_detail	sort_by	image_picker	account
count	455401.000000	455401.000000	455401.000000	455401.000000	455401.000000	455
mean	0.099150	0.074521	0.112916	0.036849	0.026735	
std	0.298864	0.262617	0.316450	0.188391	0.161307	
min	0.000000	0.000000	0.000000	0.000000	0.000000	
25%	0.000000	0.000000	0.000000	0.000000	0.000000	
50%	0.000000	0.000000	0.000000	0.000000	0.000000	
75%	0.000000	0.000000	0.000000	0.000000	0.000000	
max	1.000000	1.000000	1.000000	1.000000	1.000000	

8 rows × 24 columns

The data points are binary encoded.What this means is that every data point is encoded as a sequence of 1's and 0's, where each 1 indicates that a certain feature is present and each 0 indicates that the same feature does not exist.

For instance, after the basket icon, when the customer logged into or he has items in his wish list and are stored in the associated columns; then these data points becomes 1 otherwise it's 0.

```
In [ ]:  has_blank = dataset.isnull().values.any()
         print(has_blank)
```

```
False
```

```
In [ ]:  dataset.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 455401 entries, 0 to 455400
Data columns (total 25 columns):
 #   Column                 Non-Null Count    Dtype
---  ------                 --------------    -----
 0   UserID                 455401 non-null   object
 1   basket_icon_click      455401 non-null   int64
 2   basket_add_list        455401 non-null   int64
 3   basket_add_detail      455401 non-null   int64
 4   sort_by                455401 non-null   int64
 5   image_picker           455401 non-null   int64
 6   account_page_click     455401 non-null   int64
 7   promo_banner_click     455401 non-null   int64
 8   detail_wishlist_add    455401 non-null   int64
 9   list_size_dropdown     455401 non-null   int64
 10  closed_minibasket_click  455401 non-null  int64
 11  checked_delivery_detail  455401 non-null  int64
 12  checked_returns_detail   455401 non-null  int64
 13  sign_in                455401 non-null   int64
 14  saw_checkout           455401 non-null   int64
 15  saw_sizecharts         455401 non-null   int64
 16  saw_delivery           455401 non-null   int64
 17  saw_account_upgrade    455401 non-null   int64
 18  saw_homepage           455401 non-null   int64
 19  device_mobile          455401 non-null   int64
 20  device_computer        455401 non-null   int64
 21  device_tablet          455401 non-null   int64
 22  returning_user         455401 non-null   int64
 23  loc_uk                 455401 non-null   int64
 24  ordered                455401 non-null   int64
dtypes: int64(24), object(1)
memory usage: 86.9+ MB
```
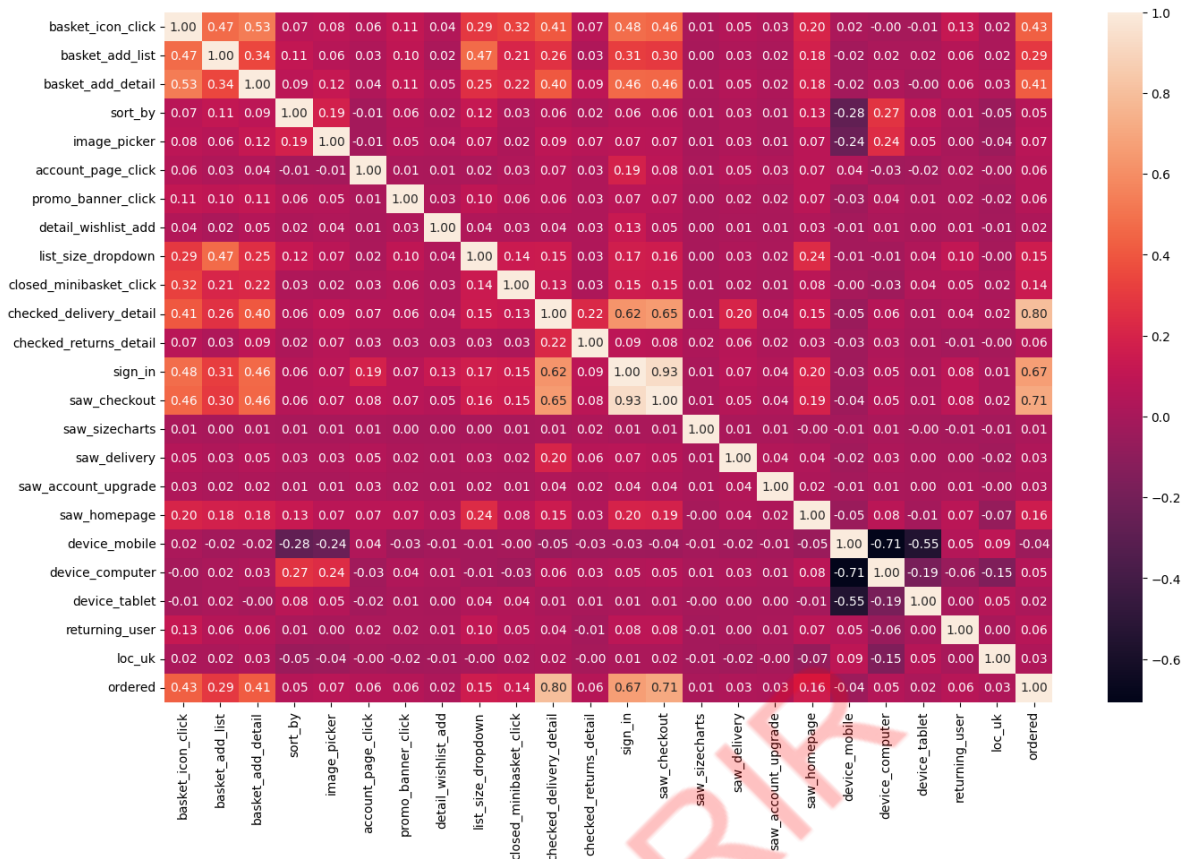
In [ ]: `dataset.shape`

Out[ ]: `(455401, 25)`

Incorporation Visualizations

Leveraging Heatmaps, it would help me understand relationships between multiple categorical variables.

In [ ]:
```python
import seaborn as sns
corr = dataset.corr()
plt.figure(figsize=(16,10))
sns.heatmap(corr, annot=True,fmt='.2f')
plt.show()
```

```
<ipython-input-10-b014e9439b2e>:2: FutureWarning: The default value of numeric_onl
y in DataFrame.corr is deprecated. In a future version, it will default to False.
Select only valid columns or specify the value of numeric_only to silence this war
ning.
  corr = dataset.corr()
```

```
In [ ]: dataset.corr()['ordered'] # Finding the correlation of ordered variable to other va
```

```
<ipython-input-11-176b7f09e346>:1: FutureWarning: The default value of numeric_onl
y in DataFrame.corr is deprecated. In a future version, it will default to False.
Select only valid columns or specify the value of numeric_only to silence this war
ning.
  dataset.corr()['ordered'] # Finding the correlation of ordered variable to other
variables.
```
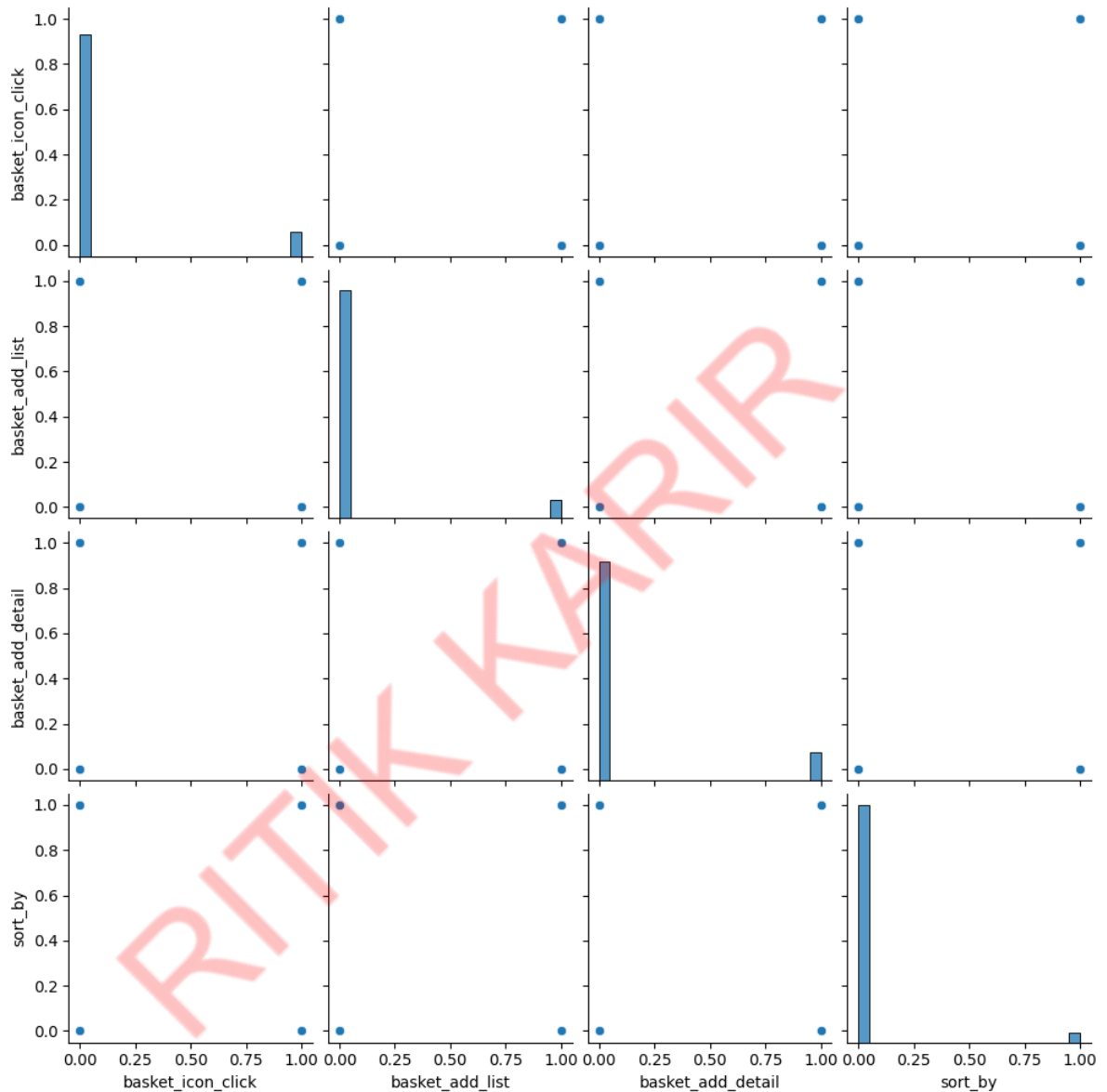
Out[ ]:
```
basket_icon_click          0.428334
basket_add_list            0.287666
basket_add_detail          0.414420
sort_by                    0.054636
image_picker               0.071492
account_page_click         0.057279
promo_banner_click         0.056533
detail_wishlist_add        0.023516
list_size_dropdown         0.154867
closed_minibasket_click    0.140011
checked_delivery_detail    0.798720
checked_returns_detail     0.059484
sign_in                    0.665556
saw_checkout               0.708986
saw_sizecharts             0.007548
saw_delivery               0.031461
saw_account_upgrade        0.025857
saw_homepage               0.157778
device_mobile             -0.042907
device_computer            0.049208
device_tablet              0.016939
returning_user             0.060295
loc_uk                     0.031643
ordered                    1.000000
Name: ordered, dtype: float64
```
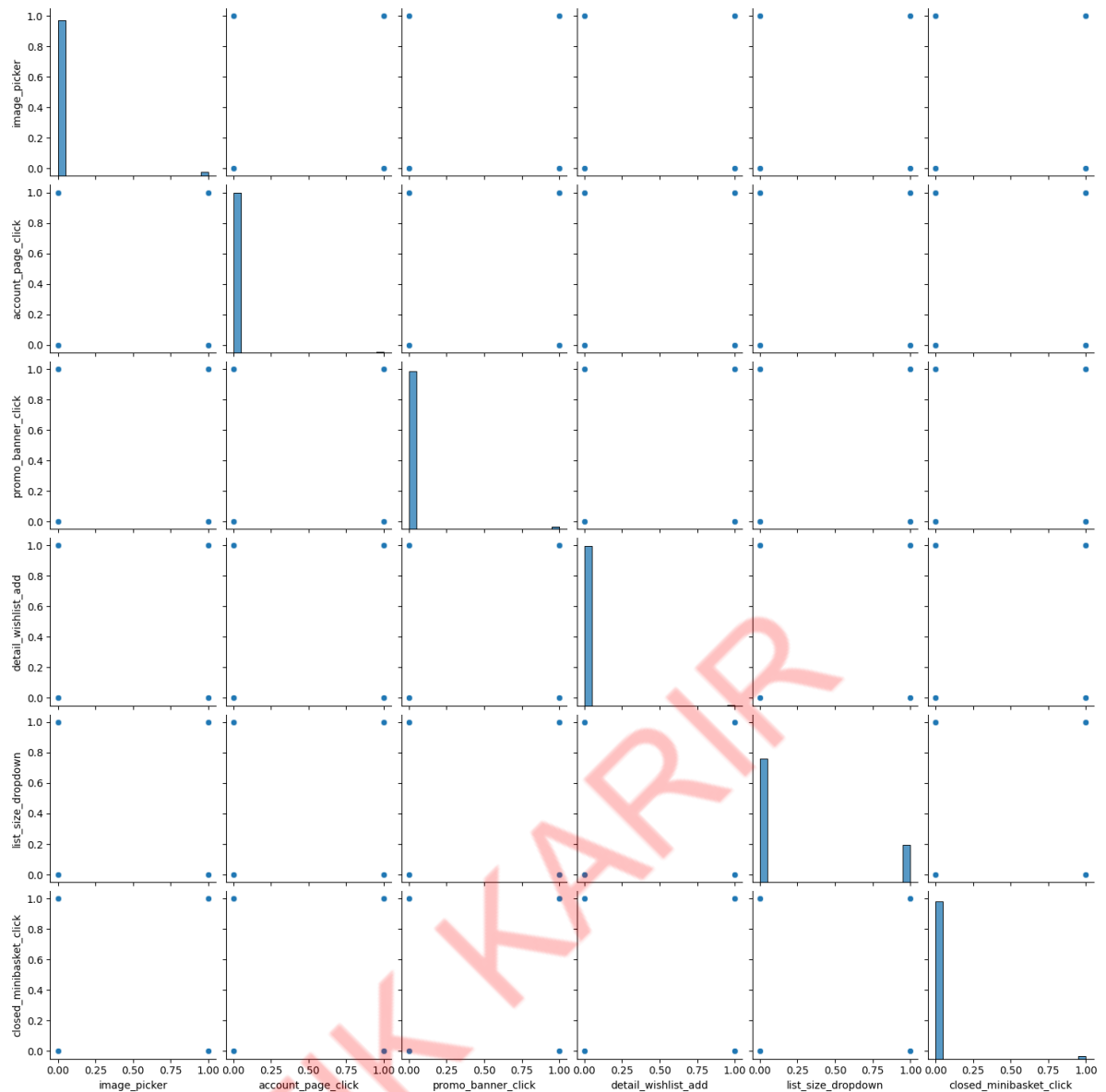
Finding coorelation with respect to the target variable "orderded"

- A positive number represents a positive correlation (number closer to 1 showesa stronger correlation)
- A negative represents a negative coorelation, whih means that variabl is not contributing to prediction of the target variable.

```
In [ ]:  g = sns.pairplot(dataset, vars=['basket_icon_click', 'basket_add_list', 'basket_ad
         plt.show()
```



```
In [ ]:  sns.pairplot(dataset, vars=['image_picker', 'account_page_click', 'promo_banner_cl
                 'detail_wishlist_add', 'list_size_dropdown', 'closed_minibasket_click'])
         plt.show()
```

Finalizing Predictors and Target Variables

Droping irrelevant columns

```
In [ ]:  predictors = dataset.drop(['ordered','UserID','device_mobile'], axis=1)
         targets = dataset.ordered
```

```
In [ ]:  print(predictors.columns)
```

```
Index(['basket_icon_click', 'basket_add_list', 'basket_add_detail', 'sort_by',
       'image_picker', 'account_page_click', 'promo_banner_click',
       'detail_wishlist_add', 'list_size_dropdown', 'closed_minibasket_click',
       'checked_delivery_detail', 'checked_returns_detail', 'sign_in',
       'saw_checkout', 'saw_sizecharts', 'saw_delivery', 'saw_account_upgrade',
       'saw_homepage', 'device_computer', 'device_tablet', 'returning_user',
       'loc_uk'],
      dtype='object')
```

Doing a Train and test Split

```
In [ ]:  x_train, x_test, y_train, y_test = train_test_split(predictors, targets, test_size
```

```
In [ ]:  print("Predictig - training :", x_train.shape, "Predictor - testing: ",x_test.shape
```

```
Predictig - training : (364320, 22) Predictor - testing:  (91081, 22)
```

Training the model using Naive Bayes

```
In [ ]:  from sklearn.naive_bayes import GaussianNB
         classifier = GaussianNB()
         classifier = classifier.fit(x_train, y_train)
```

```
In [ ]:  y_train.head()
```

```
Out[ ]:  17126     0
         342559    0
         53296     1
         268223    0
         181610    0
         Name: ordered, dtype: int64
```

confusion matrix

```
                [[True Positives, False Positives],
                 [False Negatives, True negatives]]
```

```
In [ ]:  predictions = classifier.predict(x_test)
         #Analysing Accuracy of Prections using Confusion Matrix
         sklearn.metrics.confusion_matrix(y_test,predictions)
```

```
Out[ ]:  array([[86267,  1070],
                [   41,  3703]])
```

```
In [ ]:  sklearn.metrics.accuracy_score(y_test, predictions)
```

```
Out[ ]:  0.9878020662926407
```

```
In [ ]:  f1 = f1_score(y_test, predictions)
         print(f1)
```

```
0.8695550076317952
```

Calculating Performance of the model using KFold

```
In [ ]:  from sklearn.model_selection import KFold
         from sklearn.naive_bayes import GaussianNB
         from sklearn.metrics import r2_score, mean_absolute_error
```

```
In [ ]:  X = predictors
         Y = dataset["ordered"]
```

```
In [ ]:  k = 40
         mae_score = [] #mean absolute error
         acc_train_scores = []
         acc_test_scores = []

         kf = KFold(n_splits = 40, shuffle=True, random_state=22)
         model = GaussianNB()

         for train_index, test_index in kf.split(X):
           X_train, X_test = X.iloc[train_index], X.iloc[test_index]
```

```python
    Y_train, Y_test = Y.iloc[train_index], Y.iloc[test_index]

    #training the model on the training fold
    model.fit(X_train, Y_train)

    #Evaluating the model on the test fold
    acc_train = r2_score(Y_train, model.predict(X_train))
    acc_test = r2_score(Y_test, model.predict(X_test))
    mae = mean_absolute_error(Y_test, model.predict(X_test))
    print(f"Accuracy Training = {acc_train}, Accuracy Testing = {acc_test}, MAE = {m

    #Calculating the numpy absolute value
    acc_train_scores.append(np.abs(acc_train))
    mae_score.append(np.abs(mae))
    acc_test_scores.append(np.abs(acc_test))

#Calculating average Mean Absolute Error
average_mae = sum(mae_score) / len(mae_score)
print(" ")
print(f"across {k} folds :- \n Average MAE; {average_mae}",
      f"Average training Accuracy: {np.mean(acc_train_scores)}",
      f"Average testing Accuracy: {np.mean(acc_test_scores)}")
```

Accuracy Training = 0.7051778630656285, Accuracy Testing = 0.682926623591708, MAE
= 0.012471456174249078
Accuracy Training = 0.7065397149764158, Accuracy Testing = 0.6860096276104519, MAE
= 0.011945542380324988
Accuracy Training = 0.7036607824615968, Accuracy Testing = 0.6902038458332873, MAE
= 0.012560386473429951
Accuracy Training = 0.7025796234181907, Accuracy Testing = 0.724189847266581, MAE
= 0.010715854194115063
Accuracy Training = 0.7043080742008154, Accuracy Testing = 0.7302957359009628, MAE
= 0.010891523935002196
Accuracy Training = 0.7029713860947009, Accuracy Testing = 0.7316140832190217, MAE
= 0.010188844971453666
Accuracy Training = 0.7048553584269458, Accuracy Testing = 0.6978132571911163, MAE
= 0.011594202898550725
Accuracy Training = 0.7089399972498565, Accuracy Testing = 0.6830048412413905, MAE
= 0.012648221343873518
Accuracy Training = 0.7028401001923787, Accuracy Testing = 0.7259585658257575, MAE
= 0.011242863416776461
Accuracy Training = 0.7054411862253112, Accuracy Testing = 0.6626056046980274, MAE
= 0.012999560825647781
Accuracy Training = 0.7054241690165752, Accuracy Testing = 0.7741987829614605, MAE
= 0.00966183574879227
Accuracy Training = 0.7063547148466336, Accuracy Testing = 0.7007887883710101, MAE
= 0.011769872639437857
Accuracy Training = 0.7034413199186886, Accuracy Testing = 0.7051958494276257, MAE
= 0.011857707509881422
Accuracy Training = 0.7065492951443637, Accuracy Testing = 0.7064279155188247, MAE
= 0.012209046991655688
Accuracy Training = 0.7025487825156111, Accuracy Testing = 0.7263620360424873, MAE
= 0.010188844971453666
Accuracy Training = 0.7058953483794179, Accuracy Testing = 0.7312922048121682, MAE
= 0.011067193675889328
Accuracy Training = 0.7053628638199716, Accuracy Testing = 0.6914762230940075, MAE
= 0.012384716732542821
Accuracy Training = 0.702656328139309, Accuracy Testing = 0.6833585049407831, MAE
= 0.012736056214317084
Accuracy Training = 0.7028862275701702, Accuracy Testing = 0.6985610293311687, MAE
= 0.012560386473429951
Accuracy Training = 0.7030649116483932, Accuracy Testing = 0.7170576685246297, MAE
= 0.011857707509881422
Accuracy Training = 0.7054963685947042, Accuracy Testing = 0.6843305291296485, MAE
= 0.01282389108476065
Accuracy Training = 0.7035513201092181, Accuracy Testing = 0.6936435716779985, MAE
= 0.011506368028107158
Accuracy Training = 0.7060527453221648, Accuracy Testing = 0.7040119153660458, MAE
= 0.012736056214317084
Accuracy Training = 0.705526630800168, Accuracy Testing = 0.6961003839213671, MAE
= 0.012296881862099254
Accuracy Training = 0.7071009706176083, Accuracy Testing = 0.680535663629256, MAE
= 0.01282389108476065
Accuracy Training = 0.7038016863617091, Accuracy Testing = 0.7383839078153829, MAE
= 0.010101010101010102
Accuracy Training = 0.7040115222497809, Accuracy Testing = 0.6893012738667263, MAE
= 0.012296881862099254
Accuracy Training = 0.7060745189638535, Accuracy Testing = 0.7298167417380017, MAE
= 0.010628019323671498
Accuracy Training = 0.7024065481732091, Accuracy Testing = 0.7347065602297386, MAE
= 0.010628019323671498
Accuracy Training = 0.7026415681299774, Accuracy Testing = 0.6830101297365032, MAE
= 0.013614404918752744
Accuracy Training = 0.7060270099836219, Accuracy Testing = 0.7200321573820108, MAE
= 0.011418533157663592
Accuracy Training = 0.7051414995069236, Accuracy Testing = 0.7225055910856515, MAE
= 0.01080368906455863

```
Accuracy Training = 0.702330082339377, Accuracy Testing = 0.7595734483670724, MAE
= 0.0103645147123408
Accuracy Training = 0.706093921036162, Accuracy Testing = 0.6457998195158317, MAE
= 0.013790074659639877
Accuracy Training = 0.7051478842052823, Accuracy Testing = 0.6980420994576706, MAE
= 0.01282389108476065
Accuracy Training = 0.7065270574033458, Accuracy Testing = 0.6307727720181947, MAE
= 0.01440491875274484
Accuracy Training = 0.7036704209288793, Accuracy Testing = 0.7138238150095886, MAE
= 0.011418533157663592
Accuracy Training = 0.7067126869108246, Accuracy Testing = 0.6933928084293799, MAE
= 0.012209046991655688
Accuracy Training = 0.7029725324847751, Accuracy Testing = 0.7210865634090731, MAE
= 0.011330698287220026
Accuracy Training = 0.7047277048590616, Accuracy Testing = 0.6946900380575951, MAE
= 0.012648221343873518

across 40 folds :-
 Average MAE; 0.011855484252401903 Average training Accuracy: 0.7046878181572905 A
verage testing Accuracy: 0.7045725206311302
```

Predicting the behaviour of our new customers

In [ ]:
```python
test_dataset = pd.read_csv('/content/testing_sample.csv')
```

In [ ]:
```python
test_dataset.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 151655 entries, 0 to 151654
Data columns (total 25 columns):
 #   Column                 Non-Null Count   Dtype
---  ------                 --------------   -----
 0   UserID                 151655 non-null  object
 1   basket_icon_click      151655 non-null  int64
 2   basket_add_list        151655 non-null  int64
 3   basket_add_detail      151655 non-null  int64
 4   sort_by                151655 non-null  int64
 5   image_picker           151655 non-null  int64
 6   account_page_click     151655 non-null  int64
 7   promo_banner_click     151655 non-null  int64
 8   detail_wishlist_add    151655 non-null  int64
 9   list_size_dropdown     151655 non-null  int64
 10  closed_minibasket_click 151655 non-null  int64
 11  checked_delivery_detail 151655 non-null  int64
 12  checked_returns_detail 151655 non-null  int64
 13  sign_in                151655 non-null  int64
 14  saw_checkout           151655 non-null  int64
 15  saw_sizecharts         151655 non-null  int64
 16  saw_delivery           151655 non-null  int64
 17  saw_account_upgrade    151655 non-null  int64
 18  saw_homepage           151655 non-null  int64
 19  device_mobile          151655 non-null  int64
 20  device_computer        151655 non-null  int64
 21  device_tablet          151655 non-null  int64
 22  returning_user         151655 non-null  int64
 23  loc_uk                 151655 non-null  int64
 24  ordered                151655 non-null  int64
dtypes: int64(24), object(1)
memory usage: 28.9+ MB
```

In [ ]:
```python
test_dataset.describe()
```

Out[ ]:

	basket_icon_click	basket_add_list	basket_add_detail	sort_by	image_picker	account
count	151655.000000	151655.000000	151655.000000	151655.000000	151655.000000	151
mean	0.074228	0.060954	0.085444	0.036438	0.025334	
std	0.262142	0.239247	0.279542	0.187378	0.157137	
min	0.000000	0.000000	0.000000	0.000000	0.000000	
25%	0.000000	0.000000	0.000000	0.000000	0.000000	
50%	0.000000	0.000000	0.000000	0.000000	0.000000	
75%	0.000000	0.000000	0.000000	0.000000	0.000000	
max	1.000000	1.000000	1.000000	1.000000	1.000000	

8 rows × 24 columns

In [ ]:

```python
"""x_old = predictors
y_old = dataset.ordered # or you can use dataset["ordered"]"""

"""#training the model again on old dataset, previously we dropped USERID but now v
new_classifier = GaussianNB()
new_classifier.fit(x_old, y_old)"""
count = 0
# New Sample of Predictors and Targets from test_dataset
new_predictors = test_dataset.drop(["ordered","device_mobile", "UserID"], axis=1)
target_pred_proba = classifier.predict_proba(new_predictors)

# Set a threshold
threshold = 0.7

# Identify customers with a higher chance of buying the product
customers_with_high_propensity = []
for i in range(len(target_pred_proba)):
  count += 1
  if target_pred_proba[i][1] >= threshold:
    print(f"Customer with user Id : {test_dataset.UserID[i]} is likely to buy the |
  else:
    print(f"Customer with user Id : {test_dataset.UserID[i]} Won't buy")
  print(count)
```

Streaming output truncated to the last 5000 lines.
Customer with user Id : 0977-145b-05790977-145b-4j44-340633 Won't buy
148865
Customer with user Id : k368-27b9-0579k368-27b9-448b-220485 Won't buy
148866
Customer with user Id : 6d97-1b68-057j6d97-1b68-471k-900901 Won't buy
148867
Customer with user Id : 8k60-969k-057j8k60-969k-4db1-376191 is likely to buy the product
148868
Customer with user Id : b26j-bk6d-057jb26j-bk6d-44kb-839337 Won't buy
148869
Customer with user Id : 7440-771j-057b7440-771j-46b9-561512 Won't buy
148870
Customer with user Id : k657-k058-057bk657-k058-497b-347919 Won't buy
148871
Customer with user Id : 7466-11b7-057b7466-11b7-4301-36284 Won't buy
148872
Customer with user Id : 7d56-9049-057b7d56-9049-423b-208097 Won't buy
148873
Customer with user Id : 14j3-413k-057k14j3-413k-4097-150120 Won't buy
148874
Customer with user Id : 2j43-7bd0-057k2j43-7bd0-47d0-154266 Won't buy
148875
Customer with user Id : 5472-d65d-057k5472-d65d-414k-320283 Won't buy
148876
Customer with user Id : 6b15-9655-057k6b15-9655-4j37-892064 Won't buy
148877
Customer with user Id : jj42-55k5-057kjj42-55k5-479k-82814 Won't buy
148878
Customer with user Id : d761-95d2-057kd761-95d2-449b-28938 Won't buy
148879
Customer with user Id : dj92-jk70-057kdj92-jk70-4645-903424 Won't buy
148880
Customer with user Id : 27d5-4d58-057d27d5-4d58-4207-35816 Won't buy
148881
Customer with user Id : 53j8-5j85-057d53j8-5j85-4301-587132 Won't buy
148882
Customer with user Id : 89j7-4084-057d89j7-4084-4b1d-992053 Won't buy
148883
Customer with user Id : j435-8k73-057dj435-8k73-44d7-228168 Won't buy
148884
Customer with user Id : k688-5176-057dk688-5176-4j04-570312 Won't buy
148885
Customer with user Id : 38k1-77j6-057738k1-77j6-48b4-419780 Won't buy
148886
Customer with user Id : 85d9-45k2-057785d9-45k2-419j-400098 Won't buy
148887
Customer with user Id : 8786-4601-05778786-4601-4077-743097 Won't buy
148888
Customer with user Id : 3k30-k717-05803k30-k717-48d4-625542 Won't buy
148889
Customer with user Id : b979-6j71-0580b979-6j71-4bbd-575903 Won't buy
148890
Customer with user Id : b488-15kd-0580b488-15kd-453d-626758 Won't buy
148891
Customer with user Id : 7537-77kb-05827537-77kb-44k3-39413 Won't buy
148892
Customer with user Id : 7471-2k77-05837471-2k77-4140-722877 Won't buy
148893
Customer with user Id : 94d2-447j-058494d2-447j-49b4-731606 Won't buy
148894
Customer with user Id : dj41-51j0-0584dj41-51j0-4bbj-858780 Won't buy
148895

Customer with user Id : 211j-j5dd-0586211j-j5dd-4d3b-839160 Won't buy
148896
Customer with user Id : 3680-4445-05863680-4445-4794-225009 Won't buy
148897
Customer with user Id : b635-44b2-0586b635-44b2-4j4k-285598 Won't buy
148898
Customer with user Id : dk63-79j9-0586dk63-79j9-4957-487009 Won't buy
148899
Customer with user Id : k4b4-9740-0587k4b4-9740-414d-702559 Won't buy
148900
Customer with user Id : 744j-7d77-0587744j-7d77-4j37-492839 Won't buy
148901
Customer with user Id : d25k-0j4k-0588d25k-0j4k-43jj-983812 Won't buy
148902
Customer with user Id : 17k4-5547-058917k4-5547-4dk5-549330 Won't buy
148903
Customer with user Id : 273d-4k17-0589273d-4k17-4457-995238 Won't buy
148904
Customer with user Id : 2b85-0d98-05892b85-0d98-4b4k-847922 Won't buy
148905
Customer with user Id : 5k6k-7677-05895k6k-7677-474j-477403 Won't buy
148906
Customer with user Id : 64jj-1k07-058964jj-1k07-4k8b-613208 Won't buy
148907
Customer with user Id : 4285-458b-058j4285-458b-451d-482423 Won't buy
148908
Customer with user Id : b4b9-7191-058jb4b9-7191-4139-282094 Won't buy
148909
Customer with user Id : d2b5-5837-058jd2b5-5837-4k30-958072 Won't buy
148910
Customer with user Id : 1792-43j4-058b1792-43j4-42kb-14605 Won't buy
148911
Customer with user Id : k2b1-j9b7-058bk2b1-j9b7-4647-232310 Won't buy
148912
Customer with user Id : k5k4-j6k1-058kk5k4-j6k1-4j01-865655 Won't buy
148913
Customer with user Id : 0160-197d-058d0160-197d-46kj-218532 Won't buy
148914
Customer with user Id : 2184-bb27-058d2184-bb27-4702-932078 Won't buy
148915
Customer with user Id : 8766-44d0-058d8766-44d0-44bk-702582 Won't buy
148916
Customer with user Id : 8k3b-7856-058d8k3b-7856-445k-492652 Won't buy
148917
Customer with user Id : 978j-b7k0-0587978j-b7k0-4202-759218 Won't buy
148918
Customer with user Id : 7498-j7b8-05847498-j7b8-43k0-520283 Won't buy
148919
Customer with user Id : jk44-jbj4-0590jk44-jbj4-4jb8-253912 Won't buy
148920
Customer with user Id : 7798-4490-05907798-4490-4409-760963 Won't buy
148921
Customer with user Id : 8k57-5452-05918k57-5452-477b-59940 Won't buy
148922
Customer with user Id : 431d-6137-0591431d-6137-4088-479866 Won't buy
148923
Customer with user Id : b870-4443-0593b870-4443-4jkb-972686 Won't buy
148924
Customer with user Id : 7105-6b95-05937105-6b95-4694-42745 Won't buy
148925
Customer with user Id : 0708-463b-05940708-463b-4749-748296 Won't buy
148926
Customer with user Id : 1345-9818-05941345-9818-4749-524366 Won't buy
148927

Customer with user Id : 3d63-562j-05943d63-562j-4771-436388 Won't buy
148928
Customer with user Id : k7d3-1775-0594k7d3-1775-4j77-527635 Won't buy
148929
Customer with user Id : b42j-kb80-0595b42j-kb80-4kj4-282263 Won't buy
148930
Customer with user Id : d770-9j14-0595d770-9j14-48bb-694963 Won't buy
148931
Customer with user Id : 308b-j2d2-0596308b-j2d2-4188-991504 Won't buy
148932
Customer with user Id : 688b-b67k-0596688b-b67k-4j64-618837 Won't buy
148933
Customer with user Id : 816k-k444-0596816k-k444-497k-908803 Won't buy
148934
Customer with user Id : 705k-5d43-0596705k-5d43-4j59-142328 Won't buy
148935
Customer with user Id : 774d-6k75-0596774d-6k75-4930-20032 Won't buy
148936
Customer with user Id : 0kd3-7021-05970kd3-7021-43j5-798974 Won't buy
148937
Customer with user Id : b264-8417-0597b264-8417-4142-40699 Won't buy
148938
Customer with user Id : kj4d-4k90-0597kj4d-4k90-40j6-710716 Won't buy
148939
Customer with user Id : dj46-j84b-0597dj46-j84b-4j2k-470781 Won't buy
148940
Customer with user Id : 6316-d58b-05986316-d58b-4k13-515345 Won't buy
148941
Customer with user Id : 0027-77dk-059j0027-77dk-455j-842860 Won't buy
148942
Customer with user Id : 63j4-b747-059j63j4-b747-47d6-206400 Won't buy
148943
Customer with user Id : 6jk7-k0d9-059j6jk7-k0d9-405d-545334 Won't buy
148944
Customer with user Id : b374-4748-059jb374-4748-47j0-447273 Won't buy
148945
Customer with user Id : b4d7-7557-059jb4d7-7557-4b4b-203212 Won't buy
148946
Customer with user Id : 9230-5542-059b9230-5542-4757-917863 Won't buy
148947
Customer with user Id : 73kk-036k-059b73kk-036k-445j-553709 Won't buy
148948
Customer with user Id : 7bkk-0544-05977bkk-0544-4b39-871478 Won't buy
148949
Customer with user Id : 4j54-6341-05974j54-6341-4844-940964 Won't buy
148950
Customer with user Id : 0j16-3948-05940j16-3948-4b01-141279 Won't buy
148951
Customer with user Id : 1k24-0j58-05941k24-0j58-4479-47823 Won't buy
148952
Customer with user Id : 9b3d-7115-05949b3d-7115-453d-185001 Won't buy
148953
Customer with user Id : 447d-k854-0594447d-k854-4k38-746806 Won't buy
148954
Customer with user Id : 16kb-408j-05j016kb-408j-4j11-137405 Won't buy
148955
Customer with user Id : 2443-217b-05j02443-217b-47j6-125482 Won't buy
148956
Customer with user Id : dj50-2d97-05j0dj50-2d97-403k-556352 Won't buy
148957
Customer with user Id : 9758-2443-05j19758-2443-4421-747649 Won't buy
148958
Customer with user Id : j3k2-kb41-05j1j3k2-kb41-4466-211936 Won't buy
148959

Customer with user Id : d469-j9b7-05j2d469-j9b7-4884-623904 Won't buy
148960
Customer with user Id : 4j78-9954-05j14j78-9954-4770-977177 Won't buy
148961
Customer with user Id : 7j47-5j76-05j37j47-5j76-4165-937914 Won't buy
148962
Customer with user Id : 7364-2738-05j67364-2738-4877-253938 Won't buy
148963
Customer with user Id : b314-b156-05j7b314-b156-4b37-79568 Won't buy
148964
Customer with user Id : 3710-4jd8-05j83710-4jd8-4457-263551 Won't buy
148965
Customer with user Id : j962-4849-05j8j962-4849-414j-426154 Won't buy
148966
Customer with user Id : 9b64-78j6-05j99b64-78j6-4j8b-542398 is likely to buy the p
roduct
148967
Customer with user Id : kj6k-52d7-05j9kj6k-52d7-4428-440873 Won't buy
148968
Customer with user Id : 8101-d80k-05jj8101-d80k-44d6-958490 Won't buy
148969
Customer with user Id : j09k-7578-05jbj09k-7578-4692-900067 Won't buy
148970
Customer with user Id : 21b7-d68d-05jk21b7-d68d-4j75-748374 Won't buy
148971
Customer with user Id : 9k64-779j-05jd9k64-779j-4jk3-238671 Won't buy
148972
Customer with user Id : 7d46-1109-05jd7d46-1109-4108-804084 Won't buy
148973
Customer with user Id : 0jj7-8k5d-05j70jj7-8k5d-4064-794171 Won't buy
148974
Customer with user Id : 3694-0773-05j73694-0773-483j-271529 Won't buy
148975
Customer with user Id : 7j15-5470-05j77j15-5470-4744-196964 Won't buy
148976
Customer with user Id : 3546-83jd-05j43546-83jd-487j-641572 Won't buy
148977
Customer with user Id : 588k-8d79-05b0588k-8d79-4777-511289 Won't buy
148978
Customer with user Id : 6053-46k9-05b06053-46k9-4709-83167 Won't buy
148979
Customer with user Id : 79k8-4327-05b079k8-4327-441b-884623 Won't buy
148980
Customer with user Id : 4444-7405-05b14444-7405-4jk3-568453 Won't buy
148981
Customer with user Id : 3754-4219-05b23754-4219-4176-848043 Won't buy
148982
Customer with user Id : 0675-2k42-05b10675-2k42-4d97-60543 Won't buy
148983
Customer with user Id : b776-40j0-05b3b776-40j0-4553-823036 Won't buy
148984
Customer with user Id : k3kk-98k4-05b3k3kk-98k4-45b9-546092 Won't buy
148985
Customer with user Id : 4427-k4j7-05b34427-k4j7-4d72-955756 Won't buy
148986
Customer with user Id : 669d-17d4-05b4669d-17d4-49b7-552653 Won't buy
148987
Customer with user Id : 67b3-k021-05b467b3-k021-4247-319944 is likely to buy the p
roduct
148988
Customer with user Id : d757-9dj1-05b4d757-9dj1-4bj7-359071 Won't buy
148989
Customer with user Id : 49j4-67b0-05b449j4-67b0-4526-795858 Won't buy
148990

Customer with user Id : 48d1-b0k3-05b548d1-b0k3-4dk8-751076 Won't buy
148991
Customer with user Id : 3k50-77j3-05b63k50-77j3-4413-753733 Won't buy
148992
Customer with user Id : 5169-b5b4-05b65169-b5b4-47b4-582483 Won't buy
148993
Customer with user Id : 9k5d-179k-05b69k5d-179k-4677-974182 Won't buy
148994
Customer with user Id : 4j64-54kk-05b74j64-54kk-4b83-607298 Won't buy
148995
Customer with user Id : 77b9-34b7-05b777b9-34b7-417j-913187 Won't buy
148996
Customer with user Id : 4970-4993-05b84970-4993-4982-444095 Won't buy
148997
Customer with user Id : 980d-6bj5-05b8980d-6bj5-4965-161731 Won't buy
148998
Customer with user Id : 6510-6714-05b96510-6714-44db-67466 Won't buy
148999
Customer with user Id : 5dj4-641d-05bj5dj4-641d-491d-770104 Won't buy
149000
Customer with user Id : b107-75dk-05bjb107-75dk-4458-120251 Won't buy
149001
Customer with user Id : d747-d1d3-05bjd747-d1d3-4868-627044 Won't buy
149002
Customer with user Id : 44b1-8j75-05bj44b1-8j75-4687-489835 Won't buy
149003
Customer with user Id : 4814-1427-05bj4814-1427-4887-814835 Won't buy
149004
Customer with user Id : k851-0b14-05bbk851-0b14-47d7-940174 Won't buy
149005
Customer with user Id : 5k2j-07b6-05bk5k2j-07b6-45k0-776311 Won't buy
149006
Customer with user Id : j47j-d23k-05bdj47j-d23k-44j8-349633 Won't buy
149007
Customer with user Id : d773-d717-05bdd773-d717-4184-501424 Won't buy
149008
Customer with user Id : 3241-84kj-05b73241-84kj-4jb9-490204 Won't buy
149009
Customer with user Id : j852-5327-05b4j852-5327-4024-264841 Won't buy
149010
Customer with user Id : 493d-56k8-05b4493d-56k8-4jj0-777617 Won't buy
149011
Customer with user Id : 5k99-j8b2-05k05k99-j8b2-4941-548672 Won't buy
149012
Customer with user Id : j89b-4b75-05k0j89b-4b75-4b20-553368 Won't buy
149013
Customer with user Id : 3jjb-9830-05k13jjb-9830-406b-634645 Won't buy
149014
Customer with user Id : 4bd3-d973-05k14bd3-d973-4583-396050 Won't buy
149015
Customer with user Id : 9080-k928-05k19080-k928-4k35-682862 Won't buy
149016
Customer with user Id : b87d-j15k-05k1b87d-j15k-44b3-887957 Won't buy
149017
Customer with user Id : d67d-465d-05k1d67d-465d-41jb-394488 Won't buy
149018
Customer with user Id : 2443-4kb8-05k22443-4kb8-4581-901355 Won't buy
149019
Customer with user Id : 7663-14d3-05k27663-14d3-49d5-456071 Won't buy
149020
Customer with user Id : j4dj-4k73-05k3j4dj-4k73-45jd-138569 Won't buy
149021
Customer with user Id : 56j5-826j-05k456j5-826j-4432-45365 Won't buy
149022

Customer with user Id : 727d-727j-05k4727d-727j-4907-846368 Won't buy
149023
Customer with user Id : 4k2k-463k-05k44k2k-463k-4b57-224693 Won't buy
149024
Customer with user Id : 21d1-084k-05k621d1-084k-46b9-299810 Won't buy
149025
Customer with user Id : kkb5-1k4b-05k6kkb5-1k4b-4706-890112 Won't buy
149026
Customer with user Id : 071k-3b4b-05k7071k-3b4b-4645-999796 Won't buy
149027
Customer with user Id : 6347-6d96-05k76347-6d96-473b-995853 Won't buy
149028
Customer with user Id : j747-9855-05k7j747-9855-4d84-49214 Won't buy
149029
Customer with user Id : 4b65-27j5-05k84b65-27j5-4644-319976 Won't buy
149030
Customer with user Id : 8308-b148-05k88308-b148-423k-576767 is likely to buy the product
149031
Customer with user Id : b107-6843-05k8b107-6843-48bk-324753 Won't buy
149032
Customer with user Id : b589-b704-05k8b589-b704-41j5-723425 Won't buy
149033
Customer with user Id : k467-j3b7-05k8k467-j3b7-405k-9703 Won't buy
149034
Customer with user Id : 4483-7j36-05k84483-7j36-4k41-440823 Won't buy
149035
Customer with user Id : 2839-97k4-05k92839-97k4-4k11-263960 Won't buy
149036
Customer with user Id : 9549-k707-05k99549-k707-477k-52985 Won't buy
149037
Customer with user Id : jb00-d499-05k9jb00-d499-404b-505572 Won't buy
149038
Customer with user Id : jb5d-4927-05k9jb5d-4927-438k-228638 Won't buy
149039
Customer with user Id : 117d-30b8-05kj117d-30b8-4371-578948 Won't buy
149040
Customer with user Id : 9411-9444-05kj9411-9444-4b99-297174 Won't buy
149041
Customer with user Id : b32d-3454-05kjb32d-3454-4b75-815287 Won't buy
149042
Customer with user Id : 80b5-4447-05kb80b5-4447-4j74-578377 Won't buy
149043
Customer with user Id : 9798-2147-05kb9798-2147-456d-920039 Won't buy
149044
Customer with user Id : 3013-423d-05kd3013-423d-4k96-27052 Won't buy
149045
Customer with user Id : j023-3bj4-05kdj023-3bj4-439d-334973 Won't buy
149046
Customer with user Id : 7904-0380-05kd7904-0380-44k6-851621 Won't buy
149047
Customer with user Id : 7491-246k-05k77491-246k-4j42-417138 Won't buy
149048
Customer with user Id : 917k-k7k4-05k7917k-k7k4-4904-810482 Won't buy
149049
Customer with user Id : 2249-1988-05k42249-1988-4kb5-677244 Won't buy
149050
Customer with user Id : b6b1-21j8-05k4b6b1-21j8-40d6-726088 Won't buy
149051
Customer with user Id : 7dk5-9301-05k47dk5-9301-4303-872947 Won't buy
149052
Customer with user Id : 14j0-7dk3-05d114j0-7dk3-4b47-916047 Won't buy
149053
Customer with user Id : 5608-4k27-05d15608-4k27-4856-461026 Won't buy

149054
Customer with user Id : 6244-75d9-05d16244-75d9-4j32-465981 Won't buy
149055
Customer with user Id : 64j9-7219-05d164j9-7219-44b5-580130 Won't buy
149056
Customer with user Id : b752-3k45-05d1b752-3k45-472b-56122 Won't buy
149057
Customer with user Id : 47d4-6573-05d147d4-6573-4d70-81000 Won't buy
149058
Customer with user Id : 4974-114k-05d24974-114k-4513-656728 Won't buy
149059
Customer with user Id : j2b3-536b-05d2j2b3-536b-4bkj-495513 Won't buy
149060
Customer with user Id : jdj5-7k70-05d2jdj5-7k70-4188-786831 Won't buy
149061
Customer with user Id : 9705-7241-05d39705-7241-44k7-956465 Won't buy
149062
Customer with user Id : 0b1d-8k70-05d40b1d-8k70-445b-624911 Won't buy
149063
Customer with user Id : 20b7-5d51-05d420b7-5d51-4745-908463 Won't buy
149064
Customer with user Id : 1694-j574-05d51694-j574-4b17-801136 Won't buy
149065
Customer with user Id : 25dk-088b-05d525dk-088b-4910-971575 Won't buy
149066
Customer with user Id : 7b44-b990-05d67b44-b990-4144-760905 Won't buy
149067
Customer with user Id : 970k-kdkj-05d6970k-kdkj-4450-573052 Won't buy
149068
Customer with user Id : b438-2j97-05d7b438-2j97-41d0-270082 Won't buy
149069
Customer with user Id : 75b4-j770-05d775b4-j770-4240-945587 Won't buy
149070
Customer with user Id : 9469-809k-05d89469-809k-4388-501636 Won't buy
149071
Customer with user Id : 1bj4-bbk1-05d91bj4-bbk1-4jkb-951420 Won't buy
149072
Customer with user Id : 2k31-0740-05d92k31-0740-4b99-652251 Won't buy
149073
Customer with user Id : 3k37-6714-05d93k37-6714-4174-276447 Won't buy
149074
Customer with user Id : 5103-04k6-05d95103-04k6-480b-369579 Won't buy
149075
Customer with user Id : b475-k250-05d9b475-k250-4d22-775265 Won't buy
149076
Customer with user Id : k176-8347-05d9k176-8347-4074-715818 Won't buy
149077
Customer with user Id : 1441-3k7k-05dj1441-3k7k-42d2-436931 Won't buy
149078
Customer with user Id : 8437-4d1b-05dj8437-4d1b-4b63-922707 Won't buy
149079
Customer with user Id : 1b95-40j4-05db1b95-40j4-47d7-855476 Won't buy
149080
Customer with user Id : 6707-9489-05db6707-9489-48jj-294056 Won't buy
149081
Customer with user Id : 867j-9077-05db867j-9077-472j-223099 Won't buy
149082
Customer with user Id : b544-40b9-05dbb544-40b9-4kk8-979892 Won't buy
149083
Customer with user Id : 4453-258d-05db4453-258d-4dj6-856886 Won't buy
149084
Customer with user Id : 4935-7397-05dk4935-7397-4773-671878 Won't buy
149085
Customer with user Id : 13d4-80kb-05d713d4-80kb-4b78-294548 Won't buy

149086
Customer with user Id : j773-4452-05d7j773-4452-4221-619035 Won't buy
149087
Customer with user Id : 7b15-k777-05d77b15-k777-4bdb-286718 Won't buy
149088
Customer with user Id : 32b9-j8d4-05d432b9-j8d4-401k-911816 Won't buy
149089
Customer with user Id : 5b97-765j-05705b97-765j-4136-186214 Won't buy
149090
Customer with user Id : 7311-4277-05707311-4277-4754-470128 Won't buy
149091
Customer with user Id : 8b46-jk9d-05708b46-jk9d-4467-74993 Won't buy
149092
Customer with user Id : k9d4-19jj-0570k9d4-19jj-4k7k-682429 Won't buy
149093
Customer with user Id : d5j2-k713-0571d5j2-k713-4383-794524 Won't buy
149094
Customer with user Id : 0740-dkj1-05720740-dkj1-485k-261031 Won't buy
149095
Customer with user Id : 393d-7973-0572393d-7973-4k67-169882 Won't buy
149096
Customer with user Id : d56k-0971-0572d56k-0971-4b98-845527 Won't buy
149097
Customer with user Id : 006j-bb9k-0573006j-bb9k-4724-766011 Won't buy
149098
Customer with user Id : 0j84-b05j-05730j84-b05j-4088-717928 Won't buy
149099
Customer with user Id : 5554-049d-05735554-049d-4325-570118 Won't buy
149100
Customer with user Id : b722-02j8-0573b722-02j8-4149-241013 Won't buy
149101
Customer with user Id : b230-7738-0574b230-7738-42d2-948096 Won't buy
149102
Customer with user Id : 7862-4jk7-05747862-4jk7-4389-393849 Won't buy
149103
Customer with user Id : 7245-25j6-05767245-25j6-40bd-465534 Won't buy
149104
Customer with user Id : 7b7d-7b91-05767b7d-7b91-4405-320299 Won't buy
149105
Customer with user Id : 9946-974d-05769946-974d-4887-11872 Won't buy
149106
Customer with user Id : j1d3-b3b2-0576j1d3-b3b2-4k64-534696 Won't buy
149107
Customer with user Id : j47j-j154-0576j47j-j154-4b92-701786 Won't buy
149108
Customer with user Id : 1005-79b4-05771005-79b4-49k5-507669 Won't buy
149109
Customer with user Id : k284-58k7-0577k284-58k7-4k79-336946 Won't buy
149110
Customer with user Id : kj54-bk49-0577kj54-bk49-407b-687198 Won't buy
149111
Customer with user Id : 2d57-b7j1-05782d57-b7j1-4924-507494 Won't buy
149112
Customer with user Id : 1468-1542-05791468-1542-4849-740625 Won't buy
149113
Customer with user Id : 647j-9038-0579647j-9038-471b-579404 Won't buy
149114
Customer with user Id : kb2b-4k54-0579kb2b-4k54-45k1-366452 Won't buy
149115
Customer with user Id : 5jj7-3104-057j5jj7-3104-4b75-185983 Won't buy
149116
Customer with user Id : 9k02-kjdk-057j9k02-kjdk-4763-632125 Won't buy
149117
Customer with user Id : 084k-3588-057k084k-3588-4688-702176 Won't buy

149118
Customer with user Id : 78kk-4442-057k78kk-4442-4832-433284 Won't buy
149119
Customer with user Id : 8625-jjbd-057d8625-jjbd-4094-497882 Won't buy
149120
Customer with user Id : j562-9796-057dj562-9796-41j7-288245 Won't buy
149121
Customer with user Id : kj30-3j70-057dkj30-3j70-4374-28835 Won't buy
149122
Customer with user Id : 428d-4407-0577428d-4407-48b4-971646 Won't buy
149123
Customer with user Id : j6j0-6d75-0577j6j0-6d75-4979-491148 Won't buy
149124
Customer with user Id : j763-9782-0577j763-9782-4510-555260 Won't buy
149125
Customer with user Id : d887-8d43-0577d887-8d43-4491-780728 Won't buy
149126
Customer with user Id : 54k1-7441-057454k1-7441-487d-281026 Won't buy
149127
Customer with user Id : jkb4-6j76-0574jkb4-6j76-4728-679623 Won't buy
149128
Customer with user Id : d143-321b-0574d143-321b-4j7k-340159 is likely to buy the p
roduct
149129
Customer with user Id : 0310-4b47-05400310-4b47-407b-724504 is likely to buy the p
roduct
149130
Customer with user Id : 4989-8b34-05404989-8b34-4544-445520 Won't buy
149131
Customer with user Id : 6bk7-6891-05406bk7-6891-4008-348707 Won't buy
149132
Customer with user Id : 97d9-464b-054097d9-464b-4041-163247 Won't buy
149133
Customer with user Id : b8j2-bb77-0540b8j2-bb77-420j-401034 Won't buy
149134
Customer with user Id : 74jd-8d15-054074jd-8d15-4747-629047 Won't buy
149135
Customer with user Id : 3b28-441k-05413b28-441k-4407-489001 Won't buy
149136
Customer with user Id : 7887-9d41-05417887-9d41-4b5j-142289 Won't buy
149137
Customer with user Id : 7774-266k-05417774-266k-4d23-467656 Won't buy
149138
Customer with user Id : d7j2-764d-0541d7j2-764d-4593-778467 Won't buy
149139
Customer with user Id : 0300-b466-05420300-b466-461k-438434 Won't buy
149140
Customer with user Id : 4210-1k47-05424210-1k47-40b7-205420 Won't buy
149141
Customer with user Id : 6774-6k8d-05426774-6k8d-4djj-225329 Won't buy
149142
Customer with user Id : 047b-157b-0543047b-157b-45jk-822169 Won't buy
149143
Customer with user Id : 7d63-0825-05437d63-0825-4bd4-743580 Won't buy
149144
Customer with user Id : 471b-d474-0543471b-d474-440b-597156 Won't buy
149145
Customer with user Id : 3288-7668-05443288-7668-4j75-763760 Won't buy
149146
Customer with user Id : 7361-408b-05447361-408b-4d46-612466 Won't buy
149147
Customer with user Id : 7917-7k17-05447917-7k17-427d-378210 Won't buy
149148
Customer with user Id : b49k-8238-0544b49k-8238-4db7-582179 Won't buy