Import excel into Python

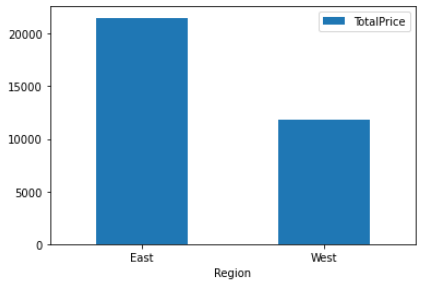
In [1]:
```
import pandas as pd
df = pd.read_excel (r'data.xlsx')
print (df)
```

```
     OrderDate Region         City  Category         Product  Quantity  \
0   2020-01-01   East       Boston      Bars          Carrot        33
1   2020-01-04   East       Boston  Crackers     Whole Wheat        87
2   2020-01-07   West  Los Angeles   Cookies  Chocolate Chip        58
3   2020-01-10   East     New York   Cookies  Chocolate Chip        82
4   2020-01-13   East       Boston   Cookies       Arrowroot        38
..         ...    ...          ...       ...             ...       ...
239 2021-12-18   East       Boston   Cookies       Arrowroot        34
240 2021-12-21   East       Boston   Cookies  Chocolate Chip       245
241 2021-12-24   East       Boston  Crackers     Whole Wheat        30
242 2021-12-27   West  Los Angeles      Bars            Bran        30
243 2021-12-30   West  Los Angeles   Cookies  Oatmeal Raisin        44

     UnitPrice  TotalPrice
0         1.77       58.41
1         3.49      303.63
2         1.87      108.46
3         1.87      153.34
4         2.18       82.84
..         ...         ...
239       2.18       74.12
240       1.87      458.15
241       3.49      104.70
242       1.87       56.10
243       2.84      124.96

[244 rows x 8 columns]
```

Overview

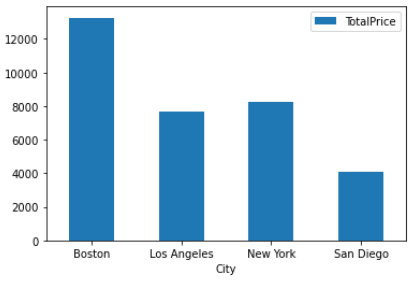
East and West region total amount

In [47]:
```
RegionValueData = pd.DataFrame({'Region':['East', 'West'], 'TotalPrice':[EastTotalValue, WestTotalValue]})
RegionValueChart = RegionValueData.plot.bar(x='Region', y='TotalPrice', rot=0)
```



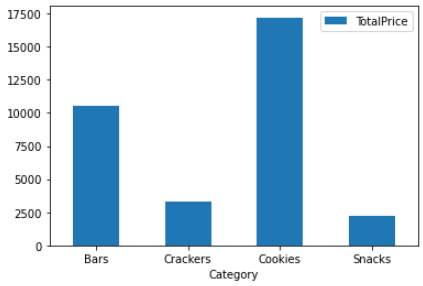
Total price by cities

In [48]:
```
CityValueData = pd.DataFrame({'City':['Boston', 'Los Angeles','New York','San Diego'], 'TotalPrice':[BostonTotalValue, LosAngeles
CityValueChart = CityValueData.plot.bar(x='City', y='TotalPrice', rot=0)
```



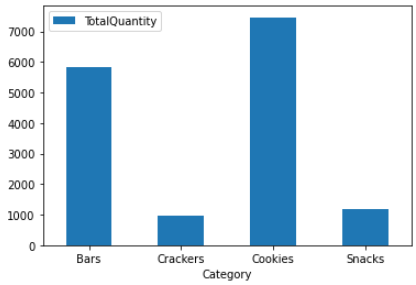
Total price based on category

In [49]:
```
CategoryValueData = pd.DataFrame({'Category':['Bars', 'Crackers','Cookies','Snacks'], 'TotalPrice':[BarsTotalValue, CrackersTotal
CategoryValueChart = CategoryValueData.plot.bar(x='Category', y='TotalPrice', rot=0)
```



Total quantity based on category

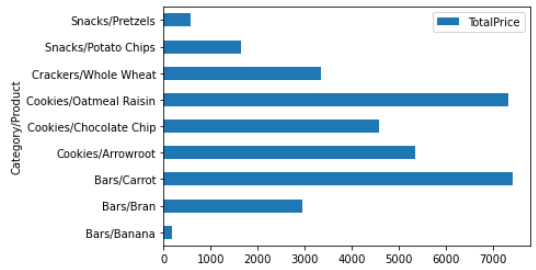
In [51]:
```
CategoryQuantityData = pd.DataFrame({'Category':['Bars', 'Crackers','Cookies','Snacks'], 'TotalQuantity':[BarsTotalQuantity, Crac
CategoryQuantityChart = CategoryQuantityData.plot.bar(x='Category', y='TotalQuantity', rot=0)
```



Total price of each product

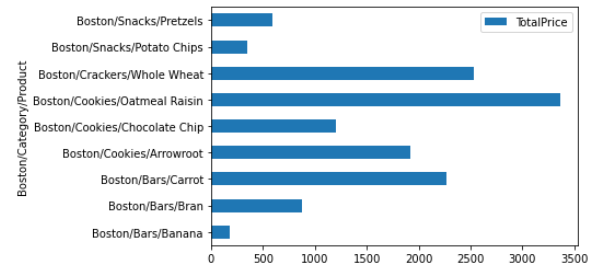
In [69]:
```
CategoryProductData = pd.DataFrame({'Category/Product':['Bars/Banana', 'Bars/Bran', 'Bars/Carrot', 'Cookies/Arrowroot', 'Cookies/
print(179.33+2945.25+7410.99+5330.10+4572.15+7310.16+3339.93+1651.77+585.90)
CategoryProductChart = CategoryProductData.plot.barh(x='Category/Product', y='TotalPrice')
```

```
33325.58
```



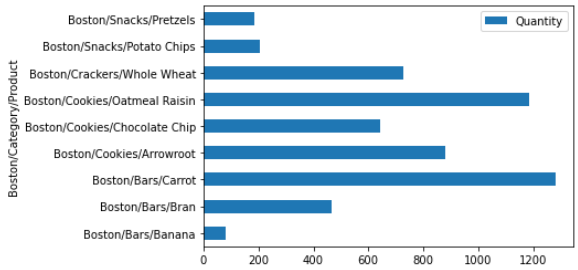
Total price of products in the city of Boston

In [70]:
```
BostonCityTotalPriceData = pd.DataFrame({'Boston/Category/Product':['Boston/Bars/Banana', 'Boston/Bars/Bran', 'Boston/Bars/Carrot
BostonCityTotalPriceChart = BostonCityTotalPriceData.plot.barh(x='Boston/Category/Product', y='TotalPrice')
```



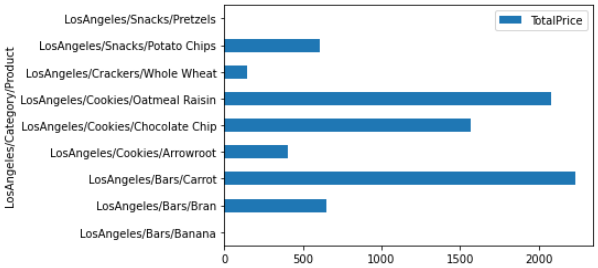
Total quantity of products sold in Boston

In [71]:
```
BostonCityTotalQuantityData = pd.DataFrame({'Boston/Category/Product':['Boston/Bars/Banana', 'Boston/Bars/Bran', 'Boston/Bars/Car
BostonCityTotalQuantityChart = BostonCityTotalQuantityData.plot.barh(x='Boston/Category/Product', y='Quantity')
```



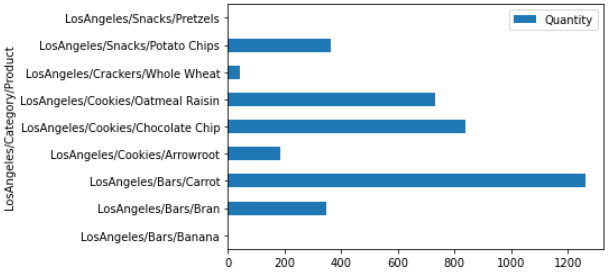
Total price of products in the city of Los Angeles

In [72]:
```
LosAngelesCityTotalPriceData = pd.DataFrame({'LosAngeles/Category/Product':['LosAngeles/Bars/Banana', 'LosAngeles/Bars/Bran', 'Lo
LosAngelesCityTotalPriceChart = LosAngelesCityTotalPriceData.plot.barh(x='LosAngeles/Category/Product', y='TotalPrice')
```



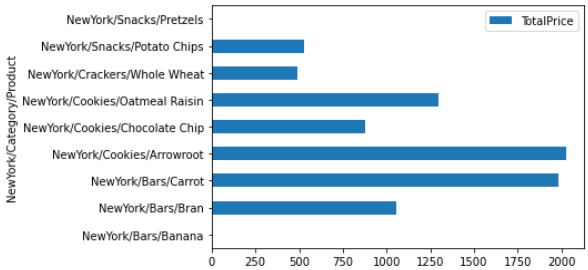
Total quantity of products sold in Los Angeles

In [74]:
```
LosAngelesCityTotalQuantityData = pd.DataFrame({'LosAngeles/Category/Product':['LosAngeles/Bars/Banana', 'LosAngeles/Bars/Bran',
LosAngelesCityTotalQuantityChart = LosAngelesCityTotalQuantityData.plot.barh(x='LosAngeles/Category/Product', y='Quantity')
```



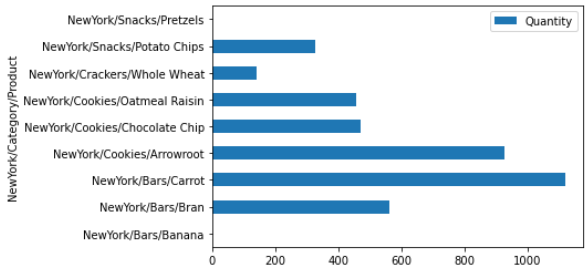
Total price of products in the city of New York

In [76]:
```
NewYorkCityTotalPriceData = pd.DataFrame({'NewYork/Category/Product':['NewYork/Bars/Banana', 'NewYork/Bars/Bran', 'NewYork/Bars/C
NewYorkCityTotalPriceChart = NewYorkCityTotalPriceData.plot.barh(x='NewYork/Category/Product', y='TotalPrice')
```



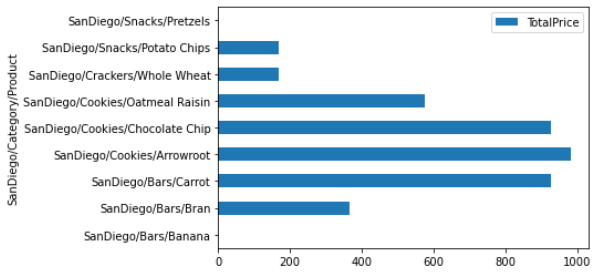
Total quantity of products in the city of New York

In [77]:
```
NewYorkCityTotalQuantityData = pd.DataFrame({'NewYork/Category/Product':['NewYork/Bars/Banana', 'NewYork/Bars/Bran', 'NewYork/Bar
NewYorkCityTotalQuantityChart = NewYorkCityTotalQuantityData.plot.barh(x='NewYork/Category/Product', y='Quantity')
```



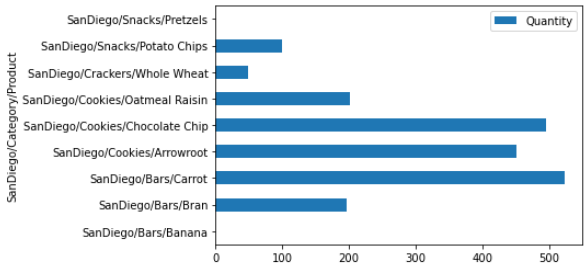
Total price of products in the city of San Diego

In [78]:
```
SanDiegoCityTotalPriceData = pd.DataFrame({'SanDiego/Category/Product':['SanDiego/Bars/Banana', 'SanDiego/Bars/Bran', 'SanDiego/E
SanDiegoCityTotalPriceChart = SanDiegoCityTotalPriceData.plot.barh(x='SanDiego/Category/Product', y='TotalPrice')
```



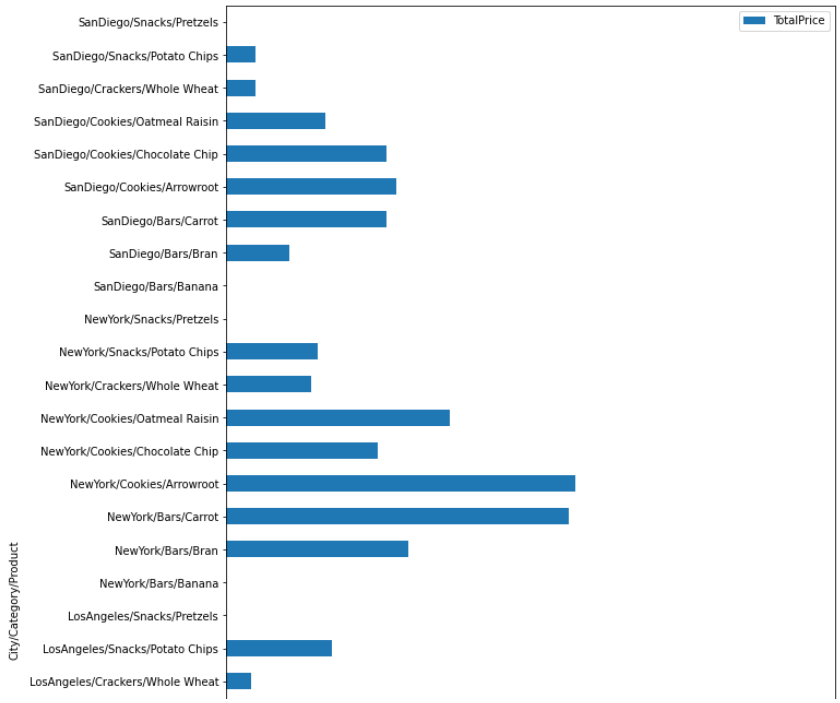
Total quantity of products in the city of San Diego

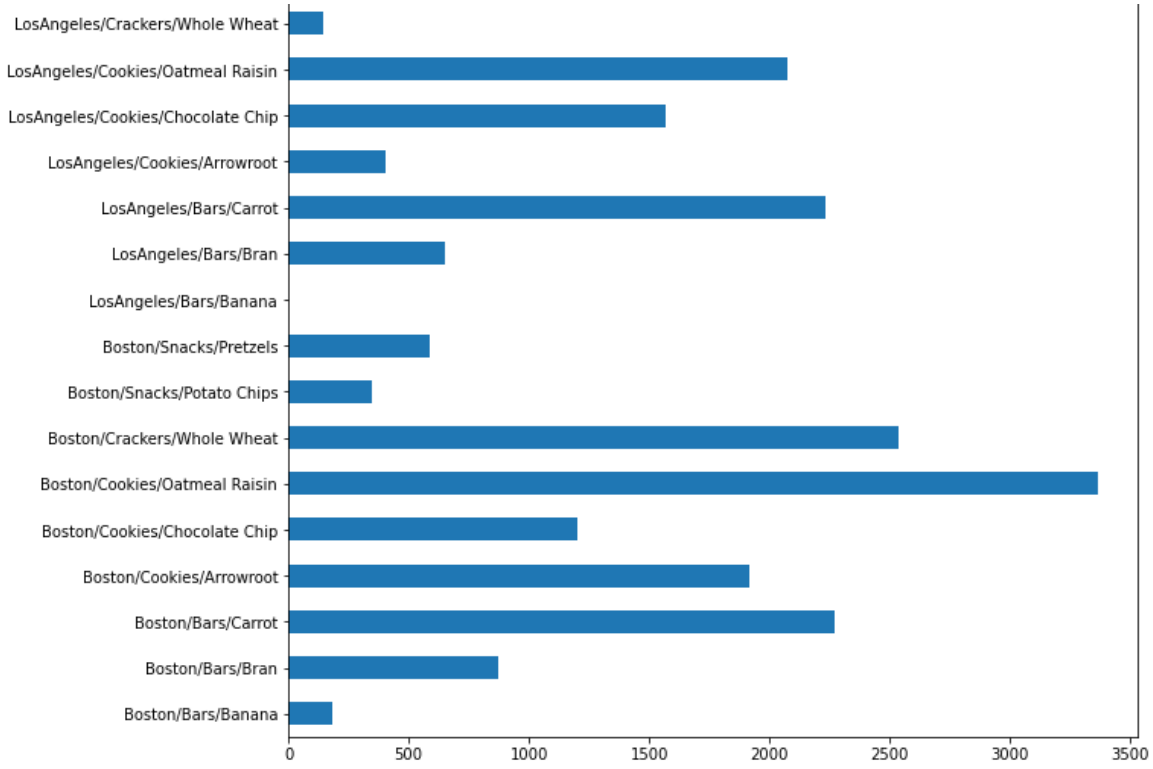
In [88]:
```
SanDiegoCityTotalQuantityData = pd.DataFrame({'SanDiego/Category/Product':['SanDiego/Bars/Banana', 'SanDiego/Bars/Bran', 'SanDieg
SanDiegoCityTotalQuantityChart = SanDiegoCityTotalQuantityData.plot.barh(x='SanDiego/Category/Product', y='Quantity')
```



Total price of products in the cities

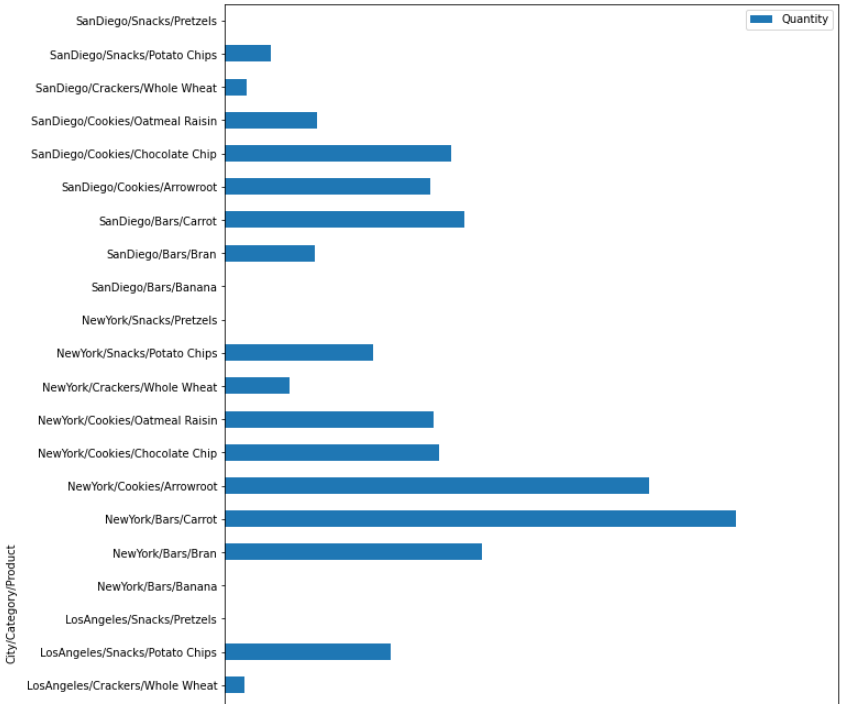
In [89]:
```
TotalPriceOfCitiesData = pd.DataFrame({'City/Category/Product':['Boston/Bars/Banana', 'Boston/Bars/Bran', 'Boston/Bars/Carrot', '
TotalPriceOfCitiesChart = TotalPriceOfCitiesData.plot.barh(x='City/Category/Product', y='TotalPrice' ,figsize=(10,20))
```

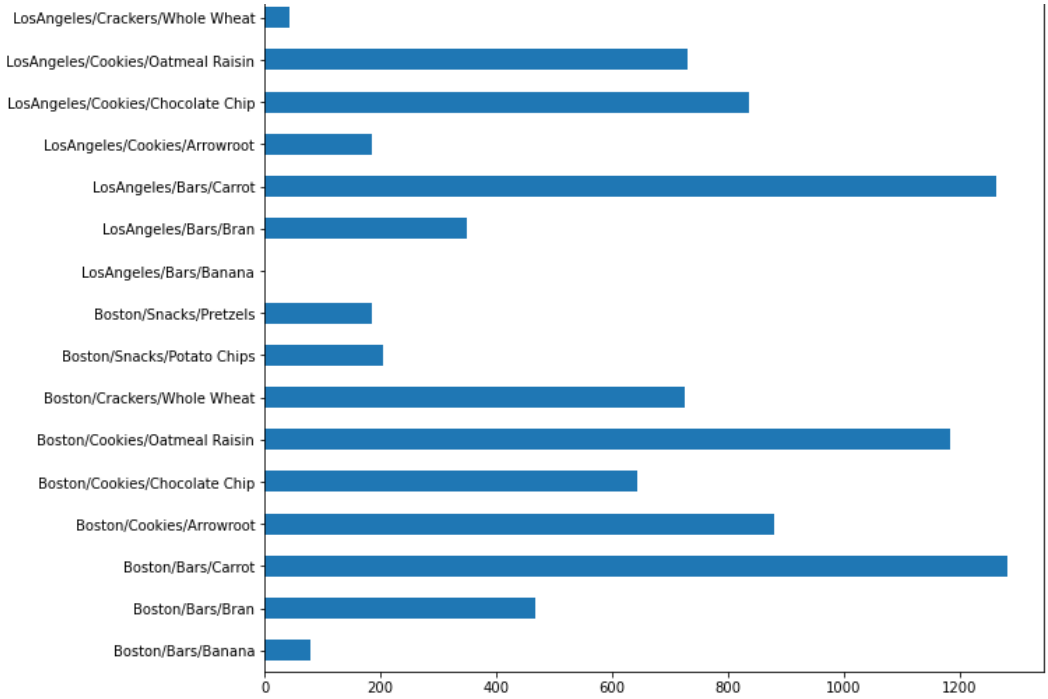




Total quantity of products in the cities

In [90]:
```
TotalQuantityOfCitiesData = pd.DataFrame({'City/Category/Product':['Boston/Bars/Banana', 'Boston/Bars/Bran', 'Boston/Bars/Carrot'
TotalQuantityOfCitiesChart = TotalQuantityOfCitiesData.plot.barh(x='City/Category/Product', y='Quantity' ,figsize=(10,20))
```




LosAngeles/Crackers/Whole Wheat
LosAngeles/Cookies/Oatmeal Raisin
LosAngeles/Cookies/Chocolate Chip
LosAngeles/Cookies/Arrowroot
LosAngeles/Bars/Carrot
LosAngeles/Bars/Bran
LosAngeles/Bars/Banana
Boston/Snacks/Pretzels
Boston/Snacks/Potato Chips
Boston/Crackers/Whole Wheat
Boston/Cookies/Oatmeal Raisin
Boston/Cookies/Chocolate Chip
Boston/Cookies/Arrowroot
Boston/Bars/Carrot
Boston/Bars/Bran
Boston/Bars/Banana
0
200
400
600
800
1000
1200