```
import numpy as np
import pandas as pd
store = pd.read csv(r'C:\Users\DELL\Downloads\Sample -
Superstore Orders.csv')
store
             Category
                                City Country/Region
                                                         Customer
Name
      Office Supplies
                             Houston United States
0
                                                         Darren
Powers
1
      Office Supplies
                          Naperville United States
                                                         Phillina
0ber
                                                         Phillina
      Office Supplies
                          Naperville United States
0ber
      Office Supplies
                          Naperville United States
                                                         Phillina
3
0ber
      Office Supplies
                        Philadelphia United States
                                                            Mick
Brown
10189 Office Supplies New York City United States Patrick
0'Donnell
10190 Office Supplies
                           Fairfield United States
                                                            Erica
Bern
                          Loveland United States
10191 Office Supplies
                                                         Jill
Matthias
10192
           Technology New York City United States Patrick
0'Donnell
10193
      Office Supplies Charlottetown
                                             Canada
                                                           Harry
Olson
      Manufacturer
                    Order Date
                                      Order ID Postal Code \
                                US-2020-103800
0
      Message Book
                    03-01-2020
                                                     77095
1
                    04-01-2020
                                US-2020-112326
                                                     60540
               GBC
2
                    04-01-2020
                                US-2020-112326
                                                     60540
             Avery
3
             SAFC0
                    04-01-2020
                                US-2020-112326
                                                     60540
4
                    05-01-2020
                                US-2020-141817
             Avery
                                                     19143
                    30-12-2023
                                US-2023-143259
      Wilson Jones
10189
                                                     10009
10190
               GBC
                    30-12-2023
                                US-2023-115427
                                                     94533
10191
             0ther
                    30-12-2023
                                US-2023-156720
                                                     80538
10192
             0ther
                    30-12-2023
                                US-2023-143259
                                                     10009
10193
      Wilson Jones 30-12-2023 CA-2023-143500
                                                       C<sub>0</sub>A
                                           Product Name
                                                          Region \
      Message Book, Wirebound, Four 5 1/2" X 4" Form...
                                                         Central
1
             GBC Standard Plastic Binding Systems Combs
                                                         Central
2
                                              Avery 508
                                                         Central
```

3 4	Avery Hi-Lit	SAFCO Boltless Steel Shelving Central er EverBold Pen Style Fluorescent East
10189 10190 10191 10192 10193		Wilson Jones Legal Size Ring Binders East GBC Binding covers West Bagged Rubber Bands West Gear Head AU3700S Headset East Wilson Jones Impact Binders East
State/	Segment Province \	Ship Date Ship Mode
0	Consumer	07-01-2020 Standard Class Texas
1	Home Office	08-01-2020 Standard Class Illinois
2	Home Office	08-01-2020 Standard Class Illinois
3	Home Office	08-01-2020 Standard Class Illinois
4	Consumer	12-01-2020 Standard Class Pennsylvania
10189	Consumer	03-01-2024 Standard Class New York
10190	Corporate	03-01-2024 Standard Class California
10191	Consumer	03-01-2024 Standard Class Colorado
10192	Consumer	03-01-2024 Standard Class New York
10193	Consumer	03-01-2024 Standard Class Prince Edward Island
0 1 2 3 4	Sub-Category Paper Binders Labels Storage Art	0.2       5.5512       2       16.448         0.8       -5.4870       2       3.540         0.2       4.2717       3       11.784         0.2       -64.7748       3       272.736         0.2       4.8840       3       19.536
10189 10190 10191 10192 10193	Binders Binders Fasteners Phones Binders	0.2       19.7910       3       52.776         0.2       6.4750       2       20.720         0.2       -0.6048       3       3.024         0.0       2.7279       7       90.930         0.2       -0.6048       3       3.024
[10194	rows x 19 co	lumns]
id(sto	re)	

```
210707536
store.columns
Index(['Category', 'City', 'Country/Region', 'Customer Name',
'Manufacturer',
       'Order Date', 'Order ID', 'Postal Code', 'Product Name',
'Region',
       'Segment', 'Ship Date', 'Ship Mode', 'State/Province', 'Sub-
Category',
       Discount', 'Profit', 'Quantity', 'Sales'],
      dtype='object')
store.shape
(10194, 19)
len(store.columns)
19
store.isnull()
       Category
                City
                        Country/Region Customer Name Manufacturer \
0
          False False
                                 False
                                                 False
                                                               False
1
          False
                False
                                 False
                                                 False
                                                               False
2
          False False
                                 False
                                                 False
                                                               False
3
          False False
                                 False
                                                 False
                                                               False
4
          False False
                                 False
                                                 False
                                                               False
. . .
10189
          False
                False
                                 False
                                                 False
                                                               False
10190
          False False
                                 False
                                                 False
                                                               False
10191
          False False
                                 False
                                                 False
                                                               False
10192
          False False
                                 False
                                                 False
                                                               False
          False False
                                 False
                                                 False
10193
                                                               False
       Order Date Order ID Postal Code Product Name Region
Segment \
            False
                      False
                                   False
                                                  False
                                                          False
False
            False
                      False
                                   False
                                                  False
                                                          False
1
False
            False
                      False
                                   False
                                                  False
                                                          False
2
False
                      False
                                   False
3
            False
                                                  False
                                                          False
False
            False
                      False
                                   False
                                                  False
                                                          False
False
. . .
10189
            False
                      False
                                   False
                                                  False
                                                          False
```

False 10190	False	e Fals	e	False	False	, F	alse
False					1 4 6 5 6		
10191 False	False	e Fals	е	False	False	F	alse
10192	False	e Fals	е	False	False	F	alse
False	_ 1	- 1		- 1	_ 1	_	•
10193 False	False	e Fals	e	False	False	: F	alse
. 4.150							
Profit	Ship Date	Ship Mod	e State	e/Province	Sub-Categ	ory	Discount
0 False	False	Fals	е	False	Fa	lse	False
1	False	Fals	е	False	Fa	lse	False
False 2 False	False	Fals	е	False	Fa	lse	False
3	False	Fals	е	False	Fa	lse	False
False 4	False	Fals	Δ	False	Fa	lse	False
False	Tacse	1 a c s	C	Tatse	10	1136	Tacse
10189 False	False	Fals	е	False	Fa	lse	False
10190 False	False	Fals	е	False	Fa	lse	False
10191	False	Fals	е	False	Fa	lse	False
False 10192	False	Fals	Α	False	Fa	lse	False
False	Tacse	1 a c s	C	Tatse	10	1136	Tacse
10193	False	Fals	е	False	Fa	lse	False
False							
0	Quantity False	Sales					
0 1	False	False False					
2	False	False					
2 3 4	False False	False False					
10189 10190	False False	False False					
10191	False	False					
10192 10193	False False	False False					
	rows x 19						

store.	isna()						
0 1 2 3 4	Category False False False False False	City Co False False False False	Fa Fa Fa	ion Cu lse lse lse lse	stomer Name False False False False	Fa Fa	urer \ alse alse alse alse alse alse
10189 10190 10191 10192 10193	False False False False False	False False False False False	Fa Fa Fa	lse lse lse lse	False False False False False	Fa Fa	alse alse alse alse alse
Segmen <sup>-</sup>	Order Date	e Order I	ID Postal	Code	Product Name	Region	
0 False	False	e Fals	se	False	False	False	
1	False	e Fals	se	False	False	False	
False 2	False	e Fals	se	False	False	False	
False 3	False	e Fals	se	False	False	False	
False 4 False	False	e Fals	se	False	False	False	
10189 False	False	e Fals	se	False	False	False	
10190 False	False	e Fals	se	False	False	False	
10191	False	e Fals	se	False	False	False	
False 10192	False	e Fals	se	False	False	False	
False 10193 False	False	e Fals	se	False	False	False	
	Ship Date	Ship Mod	de State/	Provinc	e Sub-Catego	ory Disc	ount
Profit 0 False	\ False	Fals	se	Fals	e Fa	lse Fa	alse
1 False	False	Fals	se	Fals	e Fa	lse Fa	alse
2	False	Fals	se	Fals	e Fa <sup>°</sup>	lse Fa	alse
False 3 False	False	Fals	se	Fals	e Fa	lse Fa	alse

4 False	False	False	False	False	False
10189 False	False	False	False	False	False
10190 False	False	False	False	False	False
10191	False	False	False	False	False
False 10192 False	False	False	False	False	False
10193 False	False	False	False	False	False
Qual 0 1 2 3 4 10189 10190 10191 10192 10193 [10194 row store.isnu Category City Country/Rec Customer Na Manufacture Order Date Order ID Postal Code Product Nam Region Segment Ship Date Ship Mode State/Prov	False s x 19 U().su gion ame er e me	um ( )  0  0  0  0  0  0  0  0  0  0  0  0  0			
Sub-Catego Discount Profit	ry	0 0 0			
Quantity		0			

```
Sales
                   0
dtype: int64
store.dtypes
Category
                    object
                    object
City
Country/Region
                    object
Customer Name
                    object
Manufacturer
                    object
Order Date
                    object
Order ID
                    object
Postal Code
                    object
Product Name
                    object
Region
                    object
Segment
                    object
Ship Date
                    object
Ship Mode
                    object
State/Province
                    object
Sub-Category
                    object
Discount
                   float64
Profit
                   float64
Quantity
                     int64
Sales
                   float64
dtype: object
store.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10194 entries, 0 to 10193
Data columns (total 19 columns):
#
     Column
                      Non-Null Count
                                       Dtype
- - -
     -----
 0
     Category
                      10194 non-null
                                       object
 1
                      10194 non-null
     City
                                       object
 2
     Country/Region
                      10194 non-null
                                       object
 3
     Customer Name
                      10194 non-null
                                       object
 4
     Manufacturer
                      10194 non-null
                                       object
 5
     Order Date
                      10194 non-null
                                       object
 6
     Order ID
                      10194 non-null
                                       object
     Postal Code
 7
                      10194 non-null
                                       object
 8
     Product Name
                      10194 non-null
                                       object
 9
     Region
                      10194 non-null
                                       object
     Segment
 10
                      10194 non-null
                                       object
 11
     Ship Date
                      10194 non-null
                                       object
 12
     Ship Mode
                      10194 non-null
                                       object
 13
     State/Province
                      10194 non-null
                                       object
 14
     Sub-Category
                      10194 non-null
                                       object
 15
     Discount
                      10194 non-null
                                       float64
 16
     Profit
                      10194 non-null
                                       float64
```

```
17
                   10194 non-null
    Quantity
                                  int64
    Sales
                   10194 non-null float64
18
dtypes: float64(3), int64(1), object(15)
memory usage: 1.5+ MB
pd. version
'2.2.2'
store.head()
         Category
                          City Country/Region Customer Name
Manufacturer
O Office Supplies
                       Houston United States Darren Powers
Message Book
1 Office Supplies
                    Naperville United States Phillina Ober
GBC
2 Office Supplies
                    Naperville United States Phillina Ober
Avery
3 Office Supplies
                    Naperville United States Phillina Ober
SAFC0
4 Office Supplies Philadelphia United States Mick Brown
Avery
  Order Date
                   Order ID Postal Code \
0 03-01-2020 US-2020-103800
                                  77095
1 04-01-2020 US-2020-112326
                                  60540
2 04-01-2020 US-2020-112326
                                  60540
3 04-01-2020 US-2020-112326
                                  60540
4 05-01-2020 US-2020-141817
                                  19143
                                     Product Name
                                                   Region
Segment \
  Message Book, Wirebound, Four 5 1/2" X 4" Form... Central
Consumer
         GBC Standard Plastic Binding Systems Combs Central Home
Office
                                        Avery 508 Central
                                                           Home
Office
                     SAFCO Boltless Steel Shelving Central
                                                           Home
Office
4 Avery Hi-Liter EverBold Pen Style Fluorescent ... East
Consumer
   Ship Date Ship Mode State/Province Sub-Category Discount
Profit \
0 07-01-2020 Standard Class
                                    Texas
                                                 Paper
                                                            0.2
5.5512
1 08-01-2020 Standard Class
                                 Illinois
                                               Binders
                                                            0.8 -
5.4870
```

2 08-01-2020 Standard Class 4.2717	Illinois	Labels	0.2
3 08-01-2020 Standard Class 64.7748	Illinois	Storage	0.2 -
	ennsylvania	Art	0.2
Quantity Sales 0 2 16.448 1 2 3.540 2 3 11.784 3 3 272.736 4 3 19.536			
store.head(3)			
Category City Co Manufacturer \	untry/Region C	ustomer Name	
	nited States D	arren Powers	Message
	nited States P	hillina Ober	
	nited States P	hillina Ober	
Order Date Order ID Pos 0 03-01-2020 US-2020-103800 1 04-01-2020 US-2020-112326 2 04-01-2020 US-2020-112326	tal Code \ 77095 60540 60540		
	Product	Name Region	
Segment \ 0 Message Book, Wirebound, Four Consumer	5 1/2" X 4" For	m Central	
1 GBC Standard Plastic Bi Office	nding Systems C	ombs Central	Home
2 Office	Avery	508 Central	Home
Ship Date Ship Mode Sta	te/Province Sub	-Category Dis	count
Profit \ 0 07-01-2020 Standard Class	Texas	Paper	0.2
5.5512		·	
1 08-01-2020 Standard Class 5.4870	Illinois	Binders	0.8 -
2 08-01-2020 Standard Class 4.2717	Illinois	Labels	0.2
Quantity Sales 0 2 16.448			

1 2	2	3.540 11.784					
store.	tail( <mark>3</mark> )						
N		Category	Ci	ty Country	/Region	Customer	
Name \\ 10191 Matthia		Supplies	Lovela	nd United	States	Jill	
10192 0'Donne		echnology	New York Cit	ty United	States	Patrick	
10193 Olson		Supplies	Charlotteto	wn	Canada	Harry	
10191 10192 10193		oturer Ord Other 30- Other 30- Jones 30-	12-2023 US 12-2023 US	0rder -2023-1567 -2023-1432 -2023-1435	59	Code \ 80538 10009 COA	
10191 10192 10193				West Co East Co	nsumer 0 nsumer 0	Ship Date \ 03-01-2024 03-01-2024 03-01-2024	
5 611		hip Mode	State/I	Province S	ub-Catego	ory Discount	
Profit 10191 0.6048	\ Standa	rd Class	(	Colorado	Fastene	ers 0.2 -	-
10192	Standa	rd Class	ſ	New York	Phor	nes 0.0	
2.7279 10193 0.6048	Standa	rd Class P	rince Edward	d Island	Binde	ers 0.2 -	-
10191 10192 10193	Quanti	ty Sales 3 3.024 7 90.930 3 3.024					
store							
		Category	Ci	ty Country	/Region	Customer	
Name ` O Powers	Office	Supplies	Houst	on United	States	Darren	
1	Office	Supplies	Napervil	le United	States	Phillina	
Ober 2	Office	Supplies	Napervil	le United	States	Phillina	
Ober 3	Office	Supplies	Napervil	le United	States	Phillina	
0ber 4	Office	Supplies	Philadelph:	ia United	States	Mick	

Brown											
10100	044:			Novi	Vale	C-1-1.	المخاصما	C+-+	Datai	a la	• •
10189 0'Donn				new		_		States	Patri		
10190 Bern	Office					field	United	States		Erica	
10191 Matthi		Suppl	ies		Lov	eland	United	States	J	ill	
10192 0'Donn	T	echnolo	ogy	New	York	City	United	States	Patri	ck	
10193 Olson	Office	Suppl	ies	Char	rlott	etown		Canada		Harry	
0 1 2 3 4	Manufa Messago		03 04 04 04	der [ -01-2 -01-2 -01-2 -01-2	2020 2020 2020 2020 2020	US-202 US-202 US-202	Order 20-1038 20-1123 20-1123 20-1123 20-1418	26 26 26	77095 60540 60540 60540 19143		
10189 10190 10191 10192 10193	Wilson Wilson	GBC Other Other	30 30 30	- 12 - 2 - 12 - 2	2023 2023 2023	US-202 US-202 US-202	23 - 1432 23 - 1154 23 - 1567 23 - 1432 23 - 1435	27 20 59	10009 94533 80538 10009 C0A		
0 1 2 3 4		GBC St	tanda	ard F	Plast	ic Bind Boltle	1/2" X ding Sy ess Ste	roduct Na 4" Form stems Con Avery ! el Shelv: rescent	C mbs C 508 C ing C	Region entral entral entral entral East	\
10189 10190 10191 10192 10193			Wils	son 3	G	) Ba ear Hea	GBC Bin agged R ad AU37	ing Bind ding cove ubber Ba 00S Head act Bind	ers nds set	East West West East East	
State/	Seg Province	gment	Sh:	ip Da	ate	SI	nip Mod	e			
0		sumer	07-0	91-20	920	Standa	rd Clas	S		Texa	as
1	Home 0	ffice	08-0	91-20	920	Standa	rd Clas	S		Illinoi	LS
2	Home 0	ffice	08-0	91-20	920	Standa	rd Clas	S		Illinoi	LS
3	Home 0	ffice	08-0	91-20	020	Standa	rd Clas	S		Illinoi	S

4	Cons	umer	12-01	-2020	Standa	rd	Class	i	Р	ennsylvani	.a
10189	Cons	umer	03-01	-2024	Standa	rd	Class	3		New Yor	`k
10190	Corpo	rate	03-01	-2024	Standa	rd	Class	;		Californi	.a
10191	Cons	umer	03-01	-2024	Standa	rd	Class	;		Colorad	lo
10192	Cons	umer	03-01	-2024	Standa	rd	Class	;		New Yor	`k
10193	Cons	umer	03-01	-2024	Standa	rd	Class	. Pri	nce Ed	ward Islan	ıd
0 1 2 3 4  10189 10190 10191 10192 10193 [10194	Bin La Sto Bin Faste Ph Bin	Paper ders dels orage Art ders ders ders ders ders ders ders ders		0.2 0.8 - 0.2 -6 0.2 -6 0.2 1 0.2 1 0.2 -	Profit 5.5512 5.4870 4.2717 4.7748 4.8840  9.7910 6.4750 0.6048 2.7279 0.6048	Qu	antit	2 16 2 3 3 13 3 272 3 19 . 3 52 2 26 3 3	Sales 5.448 3.540 1.784 2.736 9.536  2.776 9.720 3.024 9.930 3.024		
		Catego	ry		City	Cou	ntry/	'Regior	า	Customer	
Name 0	Office	Suppli	.es	Н	ouston	Un	ited	States	5	Darren	
Powers	Office	Suppli	.es	Nape	rville	Un	ited	States	5	Phillina	
Ober 2	Office	Suppli	.es	Nape	rville	Un	ited	States	5	Phillina	
Ober 3	Office	Suppli	.es	Nape	rville	Un	ited	States	5	Phillina	
Ober 4	Office	Suppli	.es	Philad	elphia	Un	ited	States	5	Mick	
Brown											
10189	Office	Suppli	es N	ew Yor	k City	Un	ited	States	s Pat	rick	
0'Donr 10190	ell Office	Suppli	.es	Fai	rfield	Un	ited	States	5	Erica	
Bern 10191	Office	Suppli	.es	Lo	veland	Un	ited	States	5	Jill	

Matthi 10192 O'Donn	Techno	ology New Yo	rk City United	States Pat	rick
10193 Olson		olies Charlo	ttetown	Canada	Harry
0 1 2 3 4	Manufacture Message Boo GB Aver SAFO Aver	0k 03-01-202 0C 04-01-202 0y 04-01-202 00 04-01-202 0y 05-01-202	0 US-2020-1038 0 US-2020-1123 0 US-2020-1123 0 US-2020-1123 0 US-2020-1418	26 605 26 605 26 605 17 191	95 40 40 40 43
10189 10190 10191 10192 10193	Wilson Jone GB Othe Othe Wilson Jone	as 30-12-202 30-12-202 ar 30-12-202 ar 30-12-202	3 US-2023-1432 3 US-2023-1154 3 US-2023-1567 3 US-2023-1432	59 100 27 945 20 805 59 100	33 38
0 1 2 3 4	GBC	Standard Pla SAF	P , Four 5 1/2" X stic Binding Sy CO Boltless Ste Pen Style Fluo	stems Combs Avery 508 el Shelving	Region \ Central Central Central Central East
10189 10190 10191 10192 10193				ding covers ubber Bands 00S Headset	East West West East East
<b>6</b> 1	Segment	Ship Date	Ship Mod	е	
-	Province \ Consumer	07-01-2020	Standard Clas	S	Texas
1	Home Office	98-01-2020	Standard Clas	S	Illinois
2	Home Office	08-01-2020	Standard Clas	S	Illinois
3	Home Office	08-01-2020	Standard Clas	S	Illinois
4	Consumer	12-01-2020	Standard Clas	s P	ennsylvania
10189	Consumer	03-01-2024	Standard Clas	S	New York
10190	Corporate	93-01-2024	Standard Clas	S	California

10191 Consumer 03-01-2024 Standard Class Colorado
10192 Consumer 03-01-2024 Standard Class New York
10193 Consumer 03-01-2024 Standard Class Prince Edward Island
Sub-Category         Discount         Profit         Quantity         Sales           0         Paper         0.2         5.5512         2         16.448           1         Binders         0.8         -5.4870         2         3.540           2         Labels         0.2         4.2717         3         11.784           3         Storage         0.2         -64.7748         3         272.736           4         Art         0.2         4.8840         3         19.536                   10189         Binders         0.2         19.7910         3         52.776           10190         Binders         0.2         6.4750         2         20.720           10191         Fasteners         0.2         -0.6048         3         3.024           10192         Phones         0.0         2.7279         7         90.930           10193         Binders         0.2         -0.6048         3         3.024
[10194 rows x 19 columns]
store[0:50:10]
Category City Country/Region Customer Name \ 0 Office Supplies Houston United States Darren Powers 10 Office Supplies Henderson United States Maria Etezadi 20 Furniture Dover United States Seth Vernon 30 Office Supplies San Francisco United States Brian Dahlen 40 Office Supplies Scottsdale United States Toby Swindell
Manufacturer Order Date Order ID Postal Code \ 0 Message Book 03-01-2020 US-2020-103800 77095 10 Southworth 06-01-2020 US-2020-167199 42420 20 DAX 11-01-2020 US-2020-130092 19901 30 Tennsco 13-01-2020 US-2020-157147 94109 40 GBC 19-01-2020 US-2020-146591 85254
Product Name Region Segment \
0 Message Book, Wirebound, Four 5 1/2" X 4" Form Central Consumer 10 Southworth 25% Cotton Granite Paper & Envelopes South Home Office 20 DAX Value U-Channel Document Frames, Easel Back East Consumer 30 Tennsco 6- and 18-Compartment Lockers West Consumer 40 GBC Standard Recycled Report Covers, Clear Pla West Consumer

```
Ship Mode State/Province Sub-Category
    Ship Date
Discount \
   07-01-2020 Standard Class
                                     Texas
                                                             0.2
                                                  Paper
10 10-01-2020 Standard Class
                                                  Paper
                                                             0.0
                                   Kentucky
20 14-01-2020 First Class
                                   Delaware Furnishings
                                                             0.0
30 18-01-2020 Standard Class
                                                             0.0
                                 California
                                                Storage
40 20-01-2020 First Class
                                    Arizona
                                                Binders
                                                             0.7
     Profit
             Quantity
                         Sales
     5.5512
                        16.448
0
                   2
                   1
10
     3.0084
                         6.540
20
     3.0814
                   2
                         9.940
30
   238,6530
                   5
                      1325.850
40 -23.7160
                  10
                        32.340
store.head(1)
         Category City Country/Region Customer Name
Manufacturer \
O Office Supplies Houston United States Darren Powers Message
Book
                   Order ID Postal Code \
  Order Date
0 03-01-2020 US-2020-103800
                                  77095
                                     Product Name Region
Segment \
0 Message Book, Wirebound, Four 5 1/2" X 4" Form... Central
Consumer
   Ship Date Ship Mode State/Province Sub-Category Discount
Profit \
0 07-01-2020 Standard Class
                                    Texas
                                                 Paper
                                                            0.2
5.5512
           Sales
  Quantity
        2 16.448
store['Category']
0
        Office Supplies
        Office Supplies
1
2
        Office Supplies
3
        Office Supplies
4
        Office Supplies
```

```
10189
         Office Supplies
10190
         Office Supplies
10191
         Office Supplies
10192
              Technology
10193
         Office Supplies
Name: Category, Length: 10194, dtype: object
store[['Category','City','Customer Name']]
              Category
                                 Citv
                                            Customer Name
                                            Darren Powers
0
       Office Supplies
                              Houston
       Office Supplies
                                            Phillina Ober
1
                           Naperville
2
       Office Supplies
                           Naperville
                                            Phillina Ober
3
       Office Supplies
                           Naperville
                                            Phillina Ober
4
       Office Supplies
                         Philadelphia
                                               Mick Brown
10189
      Office Supplies
                        New York City Patrick O'Donnell
10190
      Office Supplies
                            Fairfield
                                               Erica Bern
                                            Jill Matthias
      Office Supplies
10191
                             Loveland
            Technology
                        New York City Patrick O'Donnell
10192
10193 Office Supplies
                        Charlottetown
                                              Harry Olson
[10194 rows x 3 columns]
store.columns
Index(['Category', 'City', 'Country/Region', 'Customer Name',
'Manufacturer'
       'Order Date', 'Order ID', 'Postal Code', 'Product Name',
'Region',
       'Segment', 'Ship Date', 'Ship Mode', 'State/Province', 'Sub-
Category',
       'Discount', 'Profit', 'Quantity', 'Sales'],
      dtype='object')
store.dtypes
Category
                   object
City
                   object
Country/Region
                   object
Customer Name
                   object
Manufacturer
                   object
Order Date
                   object
Order ID
                   object
Postal Code
                   object
Product Name
                   object
Region
                   object
Segment
                   object
Ship Date
                   object
Ship Mode
                   object
```

```
State/Province
                   object
Sub-Category
                   object
Discount
                  float64
Profit
                  float64
Quantity
                    int64
Sales
                  float64
dtype: object
store num = store[['Discount', 'Profit', 'Quantity', 'Sales']]
store num
                           Quantity
       Discount
                  Profit
                                       Sales
0
            0.2
                  5.5512
                                      16.448
                                  2
1
            0.8
                -5.4870
                                  2
                                      3.540
            0.2
2
                  4.2717
                                  3
                                      11.784
3
                                  3
            0.2 -64.7748
                                     272.736
4
                                  3
            0.2
                  4.8840
                                      19.536
            . . .
            0.2 19.7910
                                      52.776
10189
                                  3
            0.2
                                  2
                  6.4750
                                      20.720
10190
            0.2
                -0.6048
                                  3
                                      3.024
10191
                                  7
10192
            0.0
                  2.7279
                                      90.930
                                  3
                                    3.024
10193
            0.2 -0.6048
[10194 rows x 4 columns]
store.columns
Index(['Category', 'City', 'Country/Region', 'Customer Name',
'Manufacturer',
       'Order Date', 'Order ID', 'Postal Code', 'Product Name',
'Region',
       'Segment', 'Ship Date', 'Ship Mode', 'State/Province', 'Sub-
Category',
       'Discount', 'Profit', 'Quantity', 'Sales'],
      dtype='object')
store cate = store[['Category','City','Country/Region','Customer
Name', 'Manufacturer'
                     Order Date', 'Order ID', 'Postal Code', 'Product
Name', 'Region', 'Segment',
                     'Ship Date', 'Ship Mode', 'State/Province', 'Sub-
Category'
                   ]]
store cate.dtypes
Category
                  object
                  object
City
Country/Region
                  object
Customer Name
                  object
```

```
Manufacturer
                  object
Order Date
                  object
Order ID
                  object
Postal Code
                  object
Product Name
                  object
Region
                  object
Segment
                  object
Ship Date
                  object
Ship Mode
                  object
State/Province
                  object
Sub-Category
                  object
dtype: object
store['Profit'].mean()
28.673417166960963
store['Profit'].median()
8.69
store['Profit'].mode()
0
     0.0
Name: Profit, dtype: float64
store['Profit'].var()
54040.02971828826
store['Profit'].std()
232.46511505662147
```