

```
In [1]: import pandas as pd
```

```
In [2]: store = pd.read_csv(r"C:\Users\Jan Saida\Downloads\Sample - Superstore_Orders.csv")
```

```
In [3]: store
```

Out[3]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer
1	Office Supplies	Naperville	United States	Phillina Ober	GBC	04-01-2020	US-2020-112326	60540	GBC Standard Plastic Binding Systems Combs	Central	Home Office
2	Office Supplies	Naperville	United States	Phillina Ober	Avery	04-01-2020	US-2020-112326	60540	Avery 508	Central	Home Office
3	Office Supplies	Naperville	United States	Phillina Ober	SAFCO	04-01-2020	US-2020-112326	60540	SAFCO Boltless Steel Shelving	Central	Home Office
4	Office Supplies	Philadelphia	United States	Mick Brown	Avery	05-01-2020	US-2020-141817	19143	Avery Hi-Liter EverBold Pen Style Fluorescent ...	East	Consumer
...
10189	Office Supplies	New York City	United States	Patrick O'Donnell	Wilson Jones	30-12-2023	US-2023-143259	10009	Wilson Jones Legal Size Ring Binders	East	Consumer
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate
10191	Office Supplies	Loveland	United States	Jill Matthias	Other	30-12-2023	US-2023-156720	80538	Bagged Rubber Bands	West	Consumer
10192	Technology	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Gear Head AU3700S Headset	East	Consumer
10193	Office Supplies	Charlottetown	Canada	Harry Olson	Wilson Jones	30-12-2023	CA-2023-143500	C0A	Wilson Jones Impact Binders	East	Consumer

10194 rows × 19 columns

```
In [4]: store.shape
```

```
Out[4]: (10194, 19)
```

```
In [5]: len(store)
```

```
Out[5]: 10194
```

```
In [6]: pd.__version__
```

```
Out[6]: '2.2.2'
```

```
In [7]: store.columns
```

```
Out[7]: 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')
```

In [8]: len(store.columns)

Out[8]: 19

In [9]: type(store)

Out[9]: pandas.core.frame.DataFrame

In [10]: id(store)

Out[10]: 1900540787936

In [11]: store.info

<bound method DataFrame.info of				Category	City	Country/Region	Customer Name \
0	Office Supplies	Houston	United States	Darren Powers			
1	Office Supplies	Naperville	United States	Phillina Ober			
2	Office Supplies	Naperville	United States	Phillina Ober			
3	Office Supplies	Naperville	United States	Phillina Ober			
4	Office Supplies	Philadelphia	United States	Mick Brown			
...			
10189	Office Supplies	New York City	United States	Patrick O'Donnell			
10190	Office Supplies	Fairfield	United States	Erica Bern			
10191	Office Supplies	Loveland	United States	Jill Matthias			
10192	Technology	New York City	United States	Patrick O'Donnell			
10193	Office Supplies	Charlottetown	Canada	Harry Olson			
	Manufacturer	Order Date	Order ID	Postal Code \			
0	Message Book	03-01-2020	US-2020-103800	77095			
1	GBC	04-01-2020	US-2020-112326	60540			
2	Avery	04-01-2020	US-2020-112326	60540			
3	SAFCO	04-01-2020	US-2020-112326	60540			
4	Avery	05-01-2020	US-2020-141817	19143			
...			
10189	Wilson Jones	30-12-2023	US-2023-143259	10009			
10190	GBC	30-12-2023	US-2023-115427	94533			
10191	Other	30-12-2023	US-2023-156720	80538			
10192	Other	30-12-2023	US-2023-143259	10009			
10193	Wilson Jones	30-12-2023	CA-2023-143500	C0A			
	Product Name			Region \			
0	Message Book, Wirebound, Four 5 1/2" X 4" Form...			Central			
1	GBC Standard Plastic Binding Systems Combs			Central			
2	Avery 508			Central			
3	SAFCO Boltless Steel Shelving			Central			
4	Avery Hi-Liter EverBold Pen Style Fluorescent ...			East			
...			
10189	Wilson Jones Legal Size Ring Binders			East			
10190	GBC Binding covers			West			
10191	Bagged Rubber Bands			West			
10192	Gear Head AU3700S Headset			East			
10193	Wilson Jones Impact Binders			East			
	Segment	Ship Date	Ship Mode	State/Province \			
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			
	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]>

In [12]: 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   City                  10194 non-null  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
7   Postal Code            10194 non-null  object
8   Product Name           10194 non-null  object
9   Region                 10194 non-null  object
10  Segment                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  Quantity               10194 non-null  int64
18  Sales                  10194 non-null  float64
dtypes: float64(3), int64(1), object(15)
memory usage: 1.5+ MB
```

```
In [13]: store.dtypes
```

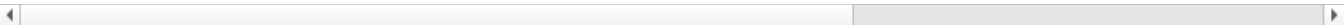
```
Out[13]: Category      object
City                  object
Country/Region        object
Customer Name          object
Manufacturer           object
Order Date             object
Order ID               object
Postal Code            object
Product Name           object
Region                 object
Segment                object
Ship Date              object
Ship Mode              object
State/Province         object
Sub-Category           object
Discount               float64
Profit                 float64
Quantity               int64
Sales                  float64
dtype: object
```

```
In [14]: store.isnull()
```

Out[14]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date	Ship Mode
0	False	False	False	False	False	False	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False	False	False	False	False	False
...
10189	False	False	False	False	False	False	False	False	False	False	False	False	False
10190	False	False	False	False	False	False	False	False	False	False	False	False	False
10191	False	False	False	False	False	False	False	False	False	False	False	False	False
10192	False	False	False	False	False	False	False	False	False	False	False	False	False
10193	False	False	False	False	False	False	False	False	False	False	False	False	False

10194 rows × 19 columns



```
In [15]: store.isnull().sum()
```

Out[15]: Category 0
City 0
Country/Region 0
Customer Name 0
Manufacturer 0
Order Date 0
Order ID 0
Postal Code 0
Product Name 0
Region 0
Segment 0
Ship Date 0
Ship Mode 0
State/Province 0
Sub-Category 0
Discount 0
Profit 0
Quantity 0
Sales 0
dtype: int64

In [16]: store.isna()

Out[16]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date	Ship Mode
0	False	False	False	False	False	False	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False	False	False	False	False	False
...
10189	False	False	False	False	False	False	False	False	False	False	False	False	False
10190	False	False	False	False	False	False	False	False	False	False	False	False	False
10191	False	False	False	False	False	False	False	False	False	False	False	False	False
10192	False	False	False	False	False	False	False	False	False	False	False	False	False
10193	False	False	False	False	False	False	False	False	False	False	False	False	False

10194 rows × 19 columns



In [17]: store.head()

Out[17]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date	
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer	07-01-2020	S
1	Office Supplies	Naperville	United States	Phillina Ober	GBC	04-01-2020	US-2020-112326	60540	GBC Standard Plastic Binding Systems Combs	Central	Home Office	08-01-2020	S
2	Office Supplies	Naperville	United States	Phillina Ober	Avery	04-01-2020	US-2020-112326	60540	Avery 508	Central	Home Office	08-01-2020	S
3	Office Supplies	Naperville	United States	Phillina Ober	SAFCO	04-01-2020	US-2020-112326	60540	SAFCO Boltless Steel Shelving	Central	Home Office	08-01-2020	S
4	Office Supplies	Philadelphia	United States	Mick Brown	Avery	05-01-2020	US-2020-141817	19143	Avery Hi-Liter EverBold Pen Style Fluorescent ...	East	Consumer	12-01-2020	S



In [18]: store[0:11]

Out[18]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer	07-01-2020
1	Office Supplies	Naperville	United States	Phillina Ober	GBC	04-01-2020	US-2020-112326	60540	GBC Standard Plastic Binding Systems Combs	Central	Home Office	08-01-2020
2	Office Supplies	Naperville	United States	Phillina Ober	Avery	04-01-2020	US-2020-112326	60540	Avery 508	Central	Home Office	08-01-2020
3	Office Supplies	Naperville	United States	Phillina Ober	SAFCO	04-01-2020	US-2020-112326	60540	SAFCO Boltless Steel Shelving	Central	Home Office	08-01-2020
4	Office Supplies	Philadelphia	United States	Mick Brown	Avery	05-01-2020	US-2020-141817	19143	Avery Hi-Liter EverBold Pen Style Fluorescent ...	East	Consumer	12-01-2020
5	Furniture	Henderson	United States	Maria Etezadi	Global	06-01-2020	US-2020-167199	42420	Global Deluxe High-Back Manager's Chair	South	Home Office	10-01-2020
6	Office Supplies	Henderson	United States	Maria Etezadi	Rogers	06-01-2020	US-2020-167199	42420	Rogers Handheld Barrel Pencil Sharpener	South	Home Office	10-01-2020
7	Office Supplies	Athens	United States	Jack O'Briant	Dixon	06-01-2020	US-2020-106054	30605	Dixon Prang Watercolor Pencils, 10-Color Set w...	South	Corporate	07-01-2020
8	Office Supplies	Henderson	United States	Maria Etezadi	Ibico	06-01-2020	US-2020-167199	42420	Ibico Hi-Tech Manual Binding System	South	Home Office	10-01-2020
9	Office Supplies	Henderson	United States	Maria Etezadi	Alliance	06-01-2020	US-2020-167199	42420	Alliance Super-Size Bands, Assorted Sizes	South	Home Office	10-01-2020
10	Office Supplies	Henderson	United States	Maria Etezadi	Southworth	06-01-2020	US-2020-167199	42420	Southworth 25% Cotton Granite Paper & Envelopes	South	Home Office	10-01-2020

In [19]: store.tail()

Out[19]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date
10189	Office Supplies	New York City	United States	Patrick O'Donnell	Wilson Jones	30-12-2023	US-2023-143259	10009	Wilson Jones Legal Size Ring Binders	East	Consumer	(01/01/2024)
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate	(01/01/2024)
10191	Office Supplies	Loveland	United States	Jill Matthias	Other	30-12-2023	US-2023-156720	80538	Bagged Rubber Bands	West	Consumer	(01/01/2024)
10192	Technology	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Gear Head AU3700S Headset	East	Consumer	(01/01/2024)
10193	Office Supplies	Charlottetown	Canada	Harry Olson	Wilson Jones	30-12-2023	CA-2023-143500	C0A	Wilson Jones Impact Binders	East	Consumer	(01/01/2024)

In [20]:

```
store.head(20)
```

Out[20]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer	(01/01/2020)
1	Office Supplies	Naperville	United States	Phillina Ober	GBC	04-01-2020	US-2020-112326	60540	GBC Standard Plastic Binding Systems Combs	Central	Home Office	(01/01/2020)
2	Office Supplies	Naperville	United States	Phillina Ober	Avery	04-01-2020	US-2020-112326	60540	Avery 508	Central	Home Office	(01/01/2020)
3	Office Supplies	Naperville	United States	Phillina Ober	SAFCO	04-01-2020	US-2020-112326	60540	SAFCO Boltless Steel Shelving	Central	Home Office	(01/01/2020)
4	Office Supplies	Philadelphia	United States	Mick Brown	Avery	05-01-2020	US-2020-141817	19143	Avery Hi-Liter EverBold Pen Style Fluorescent ...	East	Consumer	(11/01/2020)
5	Furniture	Henderson	United States	Maria Etezadi	Global	06-01-2020	US-2020-167199	42420	Global Deluxe High-Back Manager's Chair	South	Home Office	(11/01/2020)
6	Office Supplies	Henderson	United States	Maria Etezadi	Rogers	06-01-2020	US-2020-167199	42420	Rogers Handheld Barrel Pencil Sharpener	South	Home Office	(11/01/2020)
7	Office Supplies	Athens	United States	Jack O'Briant	Dixon	06-01-2020	US-2020-106054	30605	Dixon Prang Watercolor Pencils, 10-Color Set w...	South	Corporate	(01/01/2020)
8	Office Supplies	Henderson	United States	Maria Etezadi	Ibico	06-01-2020	US-2020-167199	42420	Ibico Hi-Tech Manual Binding System	South	Home Office	(11/01/2020)
9	Office Supplies	Henderson	United States	Maria Etezadi	Alliance	06-01-2020	US-2020-167199	42420	Alliance Super-Size Bands, Assorted Sizes	South	Home Office	(11/01/2020)

Southworth

10	Office Supplies	Henderson	United States	Maria Etezadi	Southworth	06-01-2020	US-2020-167199	42420	25% Cotton Granite Paper & Envelopes	South	Home Office	1/0/2020
11	Office Supplies	Los Angeles	United States	Lycoris Saunders	Xerox	06-01-2020	US-2020-130813	90049	Xerox 225	West	Consumer	0/0/2020
12	Technology	Henderson	United States	Maria Etezadi	Other	06-01-2020	US-2020-167199	42420	Wireless Extenders zBoost YX545 SOHO Signal Bo...	South	Home Office	1/0/2020
13	Technology	Henderson	United States	Maria Etezadi	GE	06-01-2020	US-2020-167199	42420	GE 30524EE4	South	Home Office	1/0/2020
14	Furniture	Huntsville	United States	Vivek Sundaresam	Howard Miller	07-01-2020	US-2020-105417	77340	Howard Miller 14-1/2" Diameter Chrome Round Wa...	Central	Consumer	1/0/2020
15	Office Supplies	Huntsville	United States	Vivek Sundaresam	Acco	07-01-2020	US-2020-105417	77340	Acco Four Pocket Poly Ring Binder with Label H...	Central	Consumer	1/0/2020
16	Office Supplies	Laredo	United States	Melanie Seite	Newell	09-01-2020	US-2020-135405	78041	Newell 312	Central	Consumer	1/0/2020
17	Technology	Laredo	United States	Melanie Seite	Memorex	09-01-2020	US-2020-135405	78041	Memorex Micro Travel Drive 8 GB	Central	Consumer	1/0/2020
18	Furniture	Springfield	United States	Anthony Jacobs	Howard Miller	10-01-2020	US-2020-149020	22153	Howard Miller 11-1/2" Diameter Ridgewood Wall ...	South	Corporate	1/0/2020
19	Office Supplies	Springfield	United States	Anthony Jacobs	Avery	10-01-2020	US-2020-149020	22153	Avery 482	South	Corporate	1/0/2020

In [21]: store.tail(30)

Out[21]:	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment
10164	Office Supplies	New York City	United States	Jennifer Ferguson	Other	28-12-2023	US-2023-164826	10024	OIC Bulk Pack Metal Binder Clips	East	Consumer
10165	Office Supplies	New York City	United States	Jennifer Ferguson	Avery	28-12-2023	US-2023-164826	10024	Avery 473	East	Consumer
10166	Office Supplies	Albuquerque	United States	Susan Vittorini	Xerox	28-12-2023	US-2023-122798	87105	Xerox 1953	West	Consumer
10167	Office Supplies	Nashville	United States	Erica Hernandez	Carina	28-12-2023	US-2023-127516	37211	Carina Double Wide Media Storage Towers in Nat...	South	Home Office
10168	Office Supplies	Albuquerque	United States	Susan Vittorini	Eldon	28-12-2023	US-2023-122798	87105	Eldon Mobile Mega Data Cart Mega Stackable A...	West	Consumer
10169	Office Supplies	San Francisco	United States	Kristen Hastings	Other	28-12-2023	US-2023-163979	94110	Adjustable Depth Letter/Legal Cart	West	Corporate
		New York		Jennifer		28-	US-		Cush Cases Heavy Duty		

10170	Technology	City	United States	Ferguson	Other	12-2023	2023-164826	10024	Rugged Cover Case for Sa...	East	Consumer
10171	Furniture	Louisville	United States	Katherine Hughes	Other	29-12-2023	US-2023-158526	40214	Harbour Creations Steel Folding Chair	South	Consumer
10172	Furniture	Louisville	United States	Katherine Hughes	DMI	29-12-2023	US-2023-158526	40214	DMI Arturo Collection Mission-style Design Woo...	South	Consumer
10173	Furniture	Los Angeles	United States	James Galang	Global	29-12-2023	US-2023-118885	90049	Global High-Back Leather Tilter, Burgundy	West	Consumer
10174	Furniture	Louisville	United States	Katherine Hughes	Global	29-12-2023	US-2023-158526	40214	Global Leather and Oak Executive Chair, Black	South	Consumer
10175	Furniture	Anaheim	United States	Ben Peterman	Nu-Dell	29-12-2023	US-2023-146626	92804	Nu-Dell Executive Frame	West	Corporate
10176	Furniture	Edmonds	United States	Bruce Stewart	Other	29-12-2023	US-2023-130631	98026	Hand-Finished Solid Wood Document Frame	West	Consumer
10177	Office Supplies	Louisville	United States	Katherine Hughes	Panasonic	29-12-2023	US-2023-158526	40214	Panasonic KP-350BK Electric Pencil Sharpener w...	South	Consumer
10178	Office Supplies	Louisville	United States	Katherine Hughes	GBC	29-12-2023	US-2023-158526	40214	GBC ProClick Spines for 32-Hole Punch	South	Consumer
10179	Office Supplies	Edmonds	United States	Bruce Stewart	Acco	29-12-2023	US-2023-130631	98026	Acco Glide Clips	West	Consumer
10180	Office Supplies	New York City	United States	Michael Chen	Other	29-12-2023	US-2023-102638	10035	Ideal Clamps	East	Consumer
10181	Office Supplies	Grand Rapids	United States	Ken Brennan	Xerox	29-12-2023	US-2023-158673	49505	Xerox 1915	Central	Corporate
10182	Technology	Los Angeles	United States	James Galang	Other	29-12-2023	US-2023-118885	90049	Adtran 1202752G1	West	Consumer
10183	Furniture	St. John's	Canada	James Peterman	Nu-Dell	29-12-2023	CA-2023-146626	A0A	Nu-Dell Executive Frame	East	Corporate
10184	Furniture	Quebec City	Canada	Bruce Galang	Other	29-12-2023	CA-2023-141531	G1B	Hand-Finished Solid Wood Document Frame	East	Consumer
10185	Office Supplies	Quebec City	Canada	Bruce Galang	Acco	29-12-2023	CA-2023-141531	G1B	Acco Glide Clips	East	Consumer
10186	Furniture	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Bush Westfield Collection Bookcases, Fully Ass...	East	Consumer
10187	Office Supplies	Columbus	United States	Chuck Clark	Eureka	30-12-2023	US-2023-126221	47201	Eureka The Boss Plus 12-Amp Hard Box Upright V...	Central	Home Office
Cardinal											

10188	Office Supplies	Fairfield	United States	Erica Bern	Cardinal	30-12-2023	US-2023-115427	94533	Slant-D Ring Binder, Heavy Gauge Vinyl	West	Corporate
10189	Office Supplies	New York City	United States	Patrick O'Donnell	Wilson Jones	30-12-2023	US-2023-143259	10009	Wilson Jones Legal Size Ring Binders	East	Consumer
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate
10191	Office Supplies	Loveland	United States	Jill Matthias	Other	30-12-2023	US-2023-156720	80538	Bagged Rubber Bands	West	Consumer
10192	Technology	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Gear Head AU3700S Headset	East	Consumer
10193	Office Supplies	Charlottetown	Canada	Harry Olson	Wilson Jones	30-12-2023	CA-2023-143500	C0A	Wilson Jones Impact Binders	East	Consumer

store[:]											
	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer
1	Office Supplies	Naperville	United States	Phillina Ober	GBC	04-01-2020	US-2020-112326	60540	GBC Standard Plastic Binding Systems Combs	Central	Home Office
2	Office Supplies	Naperville	United States	Phillina Ober	Avery	04-01-2020	US-2020-112326	60540	Avery 508	Central	Home Office
3	Office Supplies	Naperville	United States	Phillina Ober	SAFCO	04-01-2020	US-2020-112326	60540	SAFCO Boltless Steel Shelving	Central	Home Office
4	Office Supplies	Philadelphia	United States	Mick Brown	Avery	05-01-2020	US-2020-141817	19143	Avery Hi-Liter EverBold Pen Style Fluorescent ...	East	Consumer
...
10189	Office Supplies	New York City	United States	Patrick O'Donnell	Wilson Jones	30-12-2023	US-2023-143259	10009	Wilson Jones Legal Size Ring Binders	East	Consumer
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate
10191	Office Supplies	Loveland	United States	Jill Matthias	Other	30-12-2023	US-2023-156720	80538	Bagged Rubber Bands	West	Consumer
10192	Technology	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Gear Head AU3700S Headset	East	Consumer
10193	Office Supplies	Charlottetown	Canada	Harry Olson	Wilson Jones	30-12-2023	CA-2023-143500	C0A	Wilson Jones Impact Binders	East	Consumer

In [23]: store[::1]

Out[23]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment
10193	Office Supplies	Charlottetown	Canada	Harry Olson	Wilson Jones	30-12-2023	CA-2023-143500	C0A	Wilson Jones Impact Binders	East	Consumer
10192	Technology	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Gear Head AU3700S Headset	East	Consumer
10191	Office Supplies	Loveland	United States	Jill Matthias	Other	30-12-2023	US-2023-156720	80538	Bagged Rubber Bands	West	Consumer
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate
10189	Office Supplies	New York City	United States	Patrick O'Donnell	Wilson Jones	30-12-2023	US-2023-143259	10009	Wilson Jones Legal Size Ring Binders	East	Consumer
...
4	Office Supplies	Philadelphia	United States	Mick Brown	Avery	05-01-2020	US-2020-141817	19143	Avery Hi-Liter EverBold Pen Style Fluorescent ...	East	Consumer
3	Office Supplies	Naperville	United States	Phillina Ober	SAFCO	04-01-2020	US-2020-112326	60540	SAFCO Boltless Steel Shelving	Central	Home Office
2	Office Supplies	Naperville	United States	Phillina Ober	Avery	04-01-2020	US-2020-112326	60540	Avery 508	Central	Home Office
1	Office Supplies	Naperville	United States	Phillina Ober	GBC	04-01-2020	US-2020-112326	60540	GBC Standard Plastic Binding Systems Combs	Central	Home Office
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer

10194 rows × 19 columns



In [24]: store[::10]

Out[24]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer
10	Office Supplies	Henderson	United States	Maria Etezadi	Southworth	06-01-2020	US-2020-167199	42420	Southworth 25% Cotton Granite Paper & Envelopes	South	Home Office
20	Furniture	Dover	United States	Seth Vernon	DAX	11-01-2020	US-2020-130092	19901	DAX Value U-Channel Document Frames, Easel Back	East	Consumer
30	Office Supplies	San Francisco	United States	Brian Dahlen	Tennsco	13-01-2020	US-2020-157147	94109	Tennsco 6- and 18-Compartment Lockers	West	Consumer
40	Office Supplies	Scottsdale	United States	Toby Swindell	GBC	19-01-2020	US-2020-146591	85254	GBC Standard Recycled Report Covers, Clear Pla...	West	Consumer
...
10150	Office Supplies	Newark	United States	Dan Reichenbach	BIC	27-12-2023	US-2023-134404	43055	BIC Brite Liner Highlighters	East	Corporate
10160	Office Supplies	New York City	United States	Jennifer Ferguson	Storex	28-12-2023	US-2023-164826	10024	Storex Dura Pro Binders	East	Consumer
10170	Technology	New York City	United States	Jennifer Ferguson	Other	28-12-2023	US-2023-164826	10024	Cush Cases Heavy Duty Rugged Cover Case for Sa...	East	Consumer
10180	Office Supplies	New York City	United States	Michael Chen	Other	29-12-2023	US-2023-102638	10035	Ideal Clamps	East	Consumer
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate

1020 rows x 19 columns

In [25]:

```
store[5:11]
```

Out[25]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date	
5	Furniture	Henderson	United States	Maria Etezadi	Global	06-01-2020	US-2020-167199	42420	Global Deluxe High-Back Manager's Chair	South	Home Office	10-01-2020	St
6	Office Supplies	Henderson	United States	Maria Etezadi	Rogers	06-01-2020	US-2020-167199	42420	Rogers Handheld Barrel Pencil Sharpener	South	Home Office	10-01-2020	St
7	Office Supplies	Athens	United States	Jack O'Briant	Dixon	06-01-2020	US-2020-106054	30605	Dixon Prang Watercolor Pencils, 10-Color Set w...	South	Corporate	07-01-2020	
8	Office Supplies	Henderson	United States	Maria Etezadi	Ibico	06-01-2020	US-2020-167199	42420	Ibico Hi-Tech Manual Binding System	South	Home Office	10-01-2020	St
9	Office Supplies	Henderson	United States	Maria Etezadi	Alliance	06-01-2020	US-2020-167199	42420	Alliance Super-Size Bands, Assorted Sizes	South	Home Office	10-01-2020	St
10	Office Supplies	Henderson	United States	Maria Etezadi	Southworth	06-01-2020	US-2020-167199	42420	Southworth 25% Cotton Granite Paper & Envelopes	South	Home Office	10-01-2020	St

In [26]: store.columns

Out[26]: 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')

In [27]: store['Category']

Out[27]: 0 Office Supplies
1 Office Supplies
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

In [28]: store['Ship Mode']

Out[28]: 0 Standard Class
1 Standard Class
2 Standard Class
3 Standard Class
4 Standard Class
...
10189 Standard Class
10190 Standard Class
10191 Standard Class
10192 Standard Class
10193 Standard Class
Name: Ship Mode, Length: 10194, dtype: object

In [29]: store[['Category', 'City']]

Out [29]:

	Category	City
0	Office Supplies	Houston
1	Office Supplies	Naperville
2	Office Supplies	Naperville
3	Office Supplies	Naperville
4	Office Supplies	Philadelphia
...
10189	Office Supplies	New York City
10190	Office Supplies	Fairfield
10191	Office Supplies	Loveland
10192	Technology	New York City
10193	Office Supplies	Charlottetown

10194 rows × 2 columns

In [30]:

```
store_cat = 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_num = store[['Discount', 'Profit', 'Quantity', 'Sales']]
```

In [31]:

```
store_cat
```

Out[31]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer
1	Office Supplies	Naperville	United States	Phillina Ober	GBC	04-01-2020	US-2020-112326	60540	GBC Standard Plastic Binding Systems Combs	Central	Home Office
2	Office Supplies	Naperville	United States	Phillina Ober	Avery	04-01-2020	US-2020-112326	60540	Avery 508	Central	Home Office
3	Office Supplies	Naperville	United States	Phillina Ober	SAFCO	04-01-2020	US-2020-112326	60540	SAFCO Boltless Steel Shelving	Central	Home Office
4	Office Supplies	Philadelphia	United States	Mick Brown	Avery	05-01-2020	US-2020-141817	19143	Avery Hi-Liter EverBold Pen Style Fluorescent ...	East	Consumer
...
10189	Office Supplies	New York City	United States	Patrick O'Donnell	Wilson Jones	30-12-2023	US-2023-143259	10009	Wilson Jones Legal Size Ring Binders	East	Consumer
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate
10191	Office Supplies	Loveland	United States	Jill Matthias	Other	30-12-2023	US-2023-156720	80538	Bagged Rubber Bands	West	Consumer
10192	Technology	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Gear Head AU3700S Headset	East	Consumer
10193	Office Supplies	Charlottetown	Canada	Harry Olson	Wilson Jones	30-12-2023	CA-2023-143500	C0A	Wilson Jones Impact Binders	East	Consumer

10194 rows × 15 columns

```
In [32]: store_num
```

Out[32]:

	Discount	Profit	Quantity	Sales
0	0.2	5.5512	2	16.448
1	0.8	-5.4870	2	3.540
2	0.2	4.2717	3	11.784
3	0.2	-64.7748	3	272.736
4	0.2	4.8840	3	19.536
...
10189	0.2	19.7910	3	52.776
10190	0.2	6.4750	2	20.720
10191	0.2	-0.6048	3	3.024
10192	0.0	2.7279	7	90.930
10193	0.2	-0.6048	3	3.024

10194 rows x 4 columns

```
In [33]: print(len(store.columns))
          print(len(store_cat.columns))
          print(len(store_num.columns))
```

19
15
4

In [34]: store_cat.head(1)

Out[34]:	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date	Ship Mode
0	Office Supplies	Houston	United States	Darren Powers	Message Book	03-01-2020	US-2020-103800	77095	Message Book, Wirebound, Four 5 1/2" X 4" Form...	Central	Consumer	07-01-2020	Standard Class

In [35]: store_cat.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10194 entries, 0 to 10193
Data columns (total 15 columns):
#   Column                Non-Null Count  Dtype
---  -
0   Category              10194 non-null object
1   City                  10194 non-null 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
7   Postal Code           10194 non-null object
8   Product Name          10194 non-null object
9   Region                10194 non-null object
10  Segment               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
dtypes: object(15)
memory usage: 1.2+ MB
```

In [36]: store_num.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10194 entries, 0 to 10193
Data columns (total 4 columns):
#   Column      Non-Null Count  Dtype
---  -
0   Discount    10194 non-null  float64
1   Profit      10194 non-null  float64
2   Quantity    10194 non-null  int64
3   Sales       10194 non-null  float64
dtypes: float64(3), int64(1)
memory usage: 318.7 KB
```

In [37]: store_num.head()

Out[37]:	Discount	Profit	Quantity	Sales
0	0.2	5.5512	2	16.448
1	0.8	-5.4870	2	3.540
2	0.2	4.2717	3	11.784
3	0.2	-64.7748	3	272.736
4	0.2	4.8840	3	19.536

In [38]: store_cat.tail()

Out[38]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date
10189	Office Supplies	New York City	United States	Patrick O'Donnell	Wilson Jones	30-12-2023	US-2023-143259	10009	Wilson Jones Legal Size Ring Binders	East	Consumer	(01-01-2024)
10190	Office Supplies	Fairfield	United States	Erica Bern	GBC	30-12-2023	US-2023-115427	94533	GBC Binding covers	West	Corporate	(01-01-2024)
10191	Office Supplies	Loveland	United States	Jill Matthias	Other	30-12-2023	US-2023-156720	80538	Bagged Rubber Bands	West	Consumer	(01-01-2024)
10192	Technology	New York City	United States	Patrick O'Donnell	Other	30-12-2023	US-2023-143259	10009	Gear Head AU3700S Headset	East	Consumer	(01-01-2024)
10193	Office Supplies	Charlottetown	Canada	Harry Olson	Wilson Jones	30-12-2023	CA-2023-143500	C0A	Wilson Jones Impact Binders	East	Consumer	(01-01-2024)

In [39]:

store_cat.describe()

Out[39]:

	Category	City	Country/Region	Customer Name	Manufacturer	Order Date	Order ID	Postal Code	Product Name	Region	Segment	Ship Date
count	10194	10194	10194	10194	10194	10194	10194	10194	10194	10194	10194	10194
unique	3	542	2	800	183	1242	5111	654	1849	4	3	1338
top	Office Supplies	New York City	United States	William Brown	Other	05-09-2022	US-2023-100111	10035	Staples	West	Consumer	16-12-2021
freq	6128	915	9994	41	1940	38	14	263	50	3253	5281	38

In [40]:

store_num.describe()

Out[40]:

	Discount	Profit	Quantity	Sales
count	10194.000000	10194.000000	10194.000000	10194.000000
mean	0.155385	28.673417	3.791838	228.225854
std	0.206249	232.465115	2.228317	619.906839
min	0.000000	-6599.978000	1.000000	0.444000
25%	0.000000	1.760800	2.000000	17.220000
50%	0.200000	8.690000	3.000000	53.910000
75%	0.200000	29.297925	5.000000	209.500000
max	0.800000	8399.976000	14.000000	22638.480000

In [41]:

store.describe()

Out[41]:

	Discount	Profit	Quantity	Sales
count	10194.000000	10194.000000	10194.000000	10194.000000
mean	0.155385	28.673417	3.791838	228.225854
std	0.206249	232.465115	2.228317	619.906839
min	0.000000	-6599.978000	1.000000	0.444000
25%	0.000000	1.760800	2.000000	17.220000
50%	0.200000	8.690000	3.000000	53.910000
75%	0.200000	29.297925	5.000000	209.500000
max	0.800000	8399.976000	14.000000	22638.480000