

```
In [12]: import pandas as pd
rev = pd.read_csv("revenue.csv") #revenue.csv
rev
```

Out[12]:

	Date	New York	Los Angeles	Miami
0	1/1/16	985	122	499
1	1/2/16	738	788	534
2	1/3/16	14	20	933
3	1/4/16	730	904	885
4	1/5/16	114	71	253
5	1/6/16	936	502	497
6	1/7/16	123	996	115
7	1/8/16	935	492	886
8	1/9/16	846	954	823
9	1/10/16	54	285	216

```
In [13]: s = pd.Series([1,2,3,4])
s.sum()
```

Out[13]: 10

```
In [14]: #SAME WORK WITH DATA FRAME (MEANS MUTLi dimension of data)
rev.sum()
```

Out[14]: Date 1/1/161/2/161/3/161/4/161/5/161/6/161/7/161/8/...
New York 5475
Los Angeles 5134
Miami 5641
dtype: object

```
In [15]: #ADDItion of COLUMNS WISE

rev.sum(axis=0)
rev.sum(axis = "index")
```

Out[15]: Date 1/1/161/2/161/3/161/4/161/5/161/6/161/7/161/8/...
New York 5475
Los Angeles 5134
Miami 5641
dtype: object

```
In [16]: rev.sum(axis=1)
rev.sum(axis="columns")
```

Out[16]: 0 1606
1 2060
2 967
3 2519
4 438
5 1935
6 1234
7 2313
8 2623
9 555
dtype: int64

```
In [17]: nba = pd.read_csv("nba.csv")
```

In [18]: nba

Out[18]:

	Name	Team	Number	Position	Age	Height	Weight	College	Salary
0	Avery Bradley	Boston Celtics	0.0	PG	25.0	6-2	180.0	Texas	7730337.0
1	Jae Crowder	Boston Celtics	99.0	SF	25.0	6-6	235.0	Marquette	6796117.0
2	John Holland	Boston Celtics	30.0	SG	27.0	6-5	205.0	Boston University	NaN
3	R.J. Hunter	Boston Celtics	28.0	SG	22.0	6-5	185.0	Georgia State	1148640.0
4	Jonas Jerebko	Boston Celtics	8.0	PF	29.0	6-10	231.0	NaN	5000000.0
5	Amir Johnson	Boston Celtics	90.0	PF	29.0	6-9	240.0	NaN	12000000.0
6	Jordan Mickey	Boston Celtics	55.0	PF	21.0	6-8	235.0	LSU	1170960.0
7	Kelly Olynyk	Boston Celtics	41.0	C	25.0	7-0	238.0	Gonzaga	2165160.0
8	Terry Rozier	Boston Celtics	12.0	PG	22.0	6-2	190.0	Louisville	1824360.0
9	Marcus Smart	Boston Celtics	36.0	PG	22.0	6-4	220.0	Oklahoma State	3431040.0
10	Jared Sullinger	Boston Celtics	7.0	C	24.0	6-9	260.0	Ohio State	2569260.0
11	Isaiah Thomas	Boston Celtics	4.0	PG	27.0	5-9	185.0	Washington	6912869.0
12	Evan Turner	Boston Celtics	11.0	SG	27.0	6-7	220.0	Ohio State	3425510.0
13	James Young	Boston Celtics	13.0	SG	20.0	6-6	215.0	Kentucky	1749840.0
14	Tyler Zeller	Boston Celtics	44.0	C	26.0	7-0	253.0	North Carolina	2616975.0
15	Bojan Bogdanovic	Brooklyn Nets	44.0	SG	27.0	6-8	216.0	NaN	3425510.0
16	Markel Brown	Brooklyn Nets	22.0	SG	24.0	6-3	190.0	Oklahoma State	845059.0
17	Wayne Ellington	Brooklyn Nets	21.0	SG	28.0	6-4	200.0	North Carolina	1500000.0
18	Rondae Hollis-Jefferson	Brooklyn Nets	24.0	SG	21.0	6-7	220.0	Arizona	1335480.0
19	Jarrett Jack	Brooklyn Nets	2.0	PG	32.0	6-3	200.0	Georgia Tech	6300000.0
20	Sergey Karasev	Brooklyn Nets	10.0	SG	22.0	6-7	208.0	NaN	1599840.0
21	Sean Kilpatrick	Brooklyn Nets	6.0	SG	26.0	6-4	219.0	Cincinnati	134215.0
22	Shane Larkin	Brooklyn Nets	0.0	PG	23.0	5-11	175.0	Miami (FL)	1500000.0
23	Brook Lopez	Brooklyn Nets	11.0	C	28.0	7-0	275.0	Stanford	19689000.0
24	Chris McCullough	Brooklyn Nets	1.0	PF	21.0	6-11	200.0	Syracuse	1140240.0
25	Willie Reed	Brooklyn Nets	33.0	PF	26.0	6-10	220.0	Saint Louis	947276.0
26	Thomas Robinson	Brooklyn Nets	41.0	PF	25.0	6-10	237.0	Kansas	981348.0
27	Henry Sims	Brooklyn Nets	14.0	C	26.0	6-10	248.0	Georgetown	947276.0
28	Donald Sloan	Brooklyn Nets	15.0	PG	28.0	6-3	205.0	Texas A&M	947276.0
29	Thaddeus Young	Brooklyn Nets	30.0	PF	27.0	6-8	221.0	Georgia Tech	11235955.0
...	...	...	...	...	...	...	...	...	...
428	Al-Farouq Aminu	Portland Trail Blazers	8.0	SF	25.0	6-9	215.0	Wake Forest	8042895.0
429	Pat Connaughton	Portland Trail Blazers	5.0	SG	23.0	6-5	206.0	Notre Dame	625093.0
430	Allen Crabbe	Portland Trail Blazers	23.0	SG	24.0	6-6	210.0	California	947276.0
431	Ed Davis	Portland Trail Blazers	17.0	C	27.0	6-10	240.0	North Carolina	6980802.0
432	Maurice Harkless	Portland Trail Blazers	4.0	SF	23.0	6-9	215.0	St. John's	2894059.0
433	Gerald Henderson	Portland Trail Blazers	9.0	SG	28.0	6-5	215.0	Duke	6000000.0
434	Chris Kaman	Portland Trail Blazers	35.0	C	34.0	7-0	265.0	Central Michigan	5016000.0
435	Meyers Leonard	Portland Trail Blazers	11.0	PF	24.0	7-1	245.0	Illinois	3075880.0
436	Damian Lillard	Portland Trail Blazers	0.0	PG	25.0	6-3	195.0	Weber State	4236287.0
437	C.J. McCollum	Portland Trail Blazers	3.0	SG	24.0	6-4	200.0	Lehigh	2525160.0
438	Luis Montero	Portland Trail Blazers	44.0	SG	23.0	6-7	185.0	Westchester CC	525093.0
439	Mason Plumlee	Portland Trail Blazers	24.0	C	26.0	6-11	235.0	Duke	1415520.0
440	Brian Roberts	Portland Trail Blazers	2.0	PG	30.0	6-1	173.0	Dayton	2854940.0
441	Noah Vonleh	Portland Trail Blazers	21.0	PF	20.0	6-9	240.0	Indiana	2637720.0
442	Trevor Booker	Utah Jazz	33.0	PF	28.0	6-8	228.0	Clemson	4775000.0
443	Trey Burke	Utah Jazz	3.0	PG	23.0	6-1	191.0	Michigan	2658240.0
444	Alec Burks	Utah Jazz	10.0	SG	24.0	6-6	214.0	Colorado	9463484.0
445	Dante Exum	Utah Jazz	11.0	PG	20.0	6-6	190.0	NaN	3777720.0
446	Derrick Favors	Utah Jazz	15.0	PF	24.0	6-10	265.0	Georgia Tech	12000000.0
447	Rudy Gobert	Utah Jazz	27.0	C	23.0	7-1	245.0	NaN	1175880.0
448	Gordon Hayward	Utah Jazz	20.0	SF	26.0	6-8	226.0	Butler	15409570.0
449	Rodney Hood	Utah Jazz	5.0	SG	23.0	6-8	206.0	Duke	1348440.0
450	Joe Ingles	Utah Jazz	2.0	SF	28.0	6-8	226.0	NaN	2050000.0
451	Chris Johnson	Utah Jazz	23.0	SF	26.0	6-6	206.0	Dayton	981348.0
452	Trey Lyles	Utah Jazz	41.0	PF	20.0	6-10	234.0	Kentucky	2239800.0
453	Shelvin Mack	Utah Jazz	8.0	PG	26.0	6-3	203.0	Butler	2433333.0
454	Raul Neto	Utah Jazz	25.0	PG	24.0	6-1	179.0	NaN	900000.0
455	Tibor Pleiss	Utah Jazz	21.0	C	26.0	7-3	256.0	NaN	2900000.0
456	Jeff Withey	Utah Jazz	24.0	C	26.0	7-0	231.0	Kansas	947276.0
457	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

458 rows × 9 columns

In [22]: nba.Name.head()  
type(nba.Name)

Out[22]: pandas.core.series.Series

```
In [27]: nba["Name"].head()
```

```
Out[27]: 0    Avery Bradley
1         Jae Crowder
2        John Holland
3         R.J. Hunter
4        Jonas Jerebko
Name: Name, dtype: object
```

```
In [29]: #multiple columns can be acces using List inside List
nba[["Name", "Team", "Weight"]]
```

Out[29]:

	Name	Team	Weight
0	Avery Bradley	Boston Celtics	180.0
1	Jae Crowder	Boston Celtics	235.0
2	John Holland	Boston Celtics	205.0
3	R.J. Hunter	Boston Celtics	185.0
4	Jonas Jerebko	Boston Celtics	231.0
5	Amir Johnson	Boston Celtics	240.0
6	Jordan Mickey	Boston Celtics	235.0
7	Kelly Olynyk	Boston Celtics	238.0
8	Terry Rozier	Boston Celtics	190.0
9	Marcus Smart	Boston Celtics	220.0
10	Jared Sullinger	Boston Celtics	260.0
11	Isaiah Thomas	Boston Celtics	185.0
12	Evan Turner	Boston Celtics	220.0
13	James Young	Boston Celtics	215.0
14	Tyler Zeller	Boston Celtics	253.0
15	Bojan Bogdanovic	Brooklyn Nets	216.0
16	Markel Brown	Brooklyn Nets	190.0
17	Wayne Ellington	Brooklyn Nets	200.0
18	Rondae Hollis-Jefferson	Brooklyn Nets	220.0
19	Jarrett Jack	Brooklyn Nets	200.0
20	Sergey Karasev	Brooklyn Nets	208.0
21	Sean Kilpatrick	Brooklyn Nets	219.0
22	Shane Larkin	Brooklyn Nets	175.0
23	Brook Lopez	Brooklyn Nets	275.0
24	Chris McCullough	Brooklyn Nets	200.0
25	Willie Reed	Brooklyn Nets	220.0
26	Thomas Robinson	Brooklyn Nets	237.0
27	Henry Sims	Brooklyn Nets	248.0
28	Donald Sloan	Brooklyn Nets	205.0
29	Thaddeus Young	Brooklyn Nets	221.0
...	...	...	...
428	Al-Farouq Aminu	Portland Trail Blazers	215.0
429	Pat Connaughton	Portland Trail Blazers	206.0
430	Allen Crabbe	Portland Trail Blazers	210.0
431	Ed Davis	Portland Trail Blazers	240.0
432	Maurice Harkless	Portland Trail Blazers	215.0
433	Gerald Henderson	Portland Trail Blazers	215.0
434	Chris Kaman	Portland Trail Blazers	265.0
435	Meyers Leonard	Portland Trail Blazers	245.0
436	Damian Lillard	Portland Trail Blazers	195.0
437	C.J. McCollum	Portland Trail Blazers	200.0
438	Luis Montero	Portland Trail Blazers	185.0
439	Mason Plumlee	Portland Trail Blazers	235.0
440	Brian Roberts	Portland Trail Blazers	173.0
441	Noah Vonleh	Portland Trail Blazers	240.0
442	Trevor Booker	Utah Jazz	228.0
443	Trey Burke	Utah Jazz	191.0
444	Alec Burks	Utah Jazz	214.0
445	Dante Exum	Utah Jazz	190.0
446	Derrick Favors	Utah Jazz	265.0
447	Rudy Gobert	Utah Jazz	245.0
448	Gordon Hayward	Utah Jazz	226.0
449	Rodney Hood	Utah Jazz	206.0
450	Joe Ingles	Utah Jazz	226.0
451	Chris Johnson	Utah Jazz	206.0
452	Trey Lyles	Utah Jazz	234.0
453	Shelvin Mack	Utah Jazz	203.0
454	Raul Neto	Utah Jazz	179.0
455	Tibor Pleiss	Utah Jazz	256.0
456	Jeff Withey	Utah Jazz	231.0
457	NaN	NaN	NaN

458 rows × 3 columns

In [31]:

```
select = ["Name", "Team", "Weight"]
nba[select]
```

Out[31]:

	Name	Team	Weight
0	Avery Bradley	Boston Celtics	180.0
1	Jae Crowder	Boston Celtics	235.0
2	John Holland	Boston Celtics	205.0
3	R.J. Hunter	Boston Celtics	185.0
4	Jonas Jerebko	Boston Celtics	231.0
5	Amir Johnson	Boston Celtics	240.0
6	Jordan Mickey	Boston Celtics	235.0
7	Kelly Olynyk	Boston Celtics	238.0
8	Terry Rozier	Boston Celtics	190.0
9	Marcus Smart	Boston Celtics	220.0
10	Jared Sullinger	Boston Celtics	260.0
11	Isaiah Thomas	Boston Celtics	185.0
12	Evan Turner	Boston Celtics	220.0
13	James Young	Boston Celtics	215.0
14	Tyler Zeller	Boston Celtics	253.0
15	Bojan Bogdanovic	Brooklyn Nets	216.0
16	Markel Brown	Brooklyn Nets	190.0
17	Wayne Ellington	Brooklyn Nets	200.0
18	Rondae Hollis-Jefferson	Brooklyn Nets	220.0
19	Jarrett Jack	Brooklyn Nets	200.0
20	Sergey Karasev	Brooklyn Nets	208.0
21	Sean Kilpatrick	Brooklyn Nets	219.0
22	Shane Larkin	Brooklyn Nets	175.0
23	Brook Lopez	Brooklyn Nets	275.0
24	Chris McCullough	Brooklyn Nets	200.0
25	Willie Reed	Brooklyn Nets	220.0
26	Thomas Robinson	Brooklyn Nets	237.0
27	Henry Sims	Brooklyn Nets	248.0
28	Donald Sloan	Brooklyn Nets	205.0
29	Thaddeus Young	Brooklyn Nets	221.0
...	...	...	...
428	Al-Farouq Aminu	Portland Trail Blazers	215.0
429	Pat Connaughton	Portland Trail Blazers	206.0
430	Allen Crabbe	Portland Trail Blazers	210.0
431	Ed Davis	Portland Trail Blazers	240.0
432	Maurice Harkless	Portland Trail Blazers	215.0
433	Gerald Henderson	Portland Trail Blazers	215.0
434	Chris Kaman	Portland Trail Blazers	265.0
435	Meyers Leonard	Portland Trail Blazers	245.0
436	Damian Lillard	Portland Trail Blazers	195.0
437	C.J. McCollum	Portland Trail Blazers	200.0
438	Luis Montero	Portland Trail Blazers	185.0
439	Mason Plumlee	Portland Trail Blazers	235.0
440	Brian Roberts	Portland Trail Blazers	173.0
441	Noah Vonleh	Portland Trail Blazers	240.0
442	Trevor Booker	Utah Jazz	228.0
443	Trey Burke	Utah Jazz	191.0
444	Alec Burks	Utah Jazz	214.0
445	Dante Exum	Utah Jazz	190.0
446	Derrick Favors	Utah Jazz	265.0
447	Rudy Gobert	Utah Jazz	245.0
448	Gordon Hayward	Utah Jazz	226.0
449	Rodney Hood	Utah Jazz	206.0
450	Joe Ingles	Utah Jazz	226.0
451	Chris Johnson	Utah Jazz	206.0
452	Trey Lyles	Utah Jazz	234.0
453	Shelvin Mack	Utah Jazz	203.0
454	Raul Neto	Utah Jazz	179.0
455	Tibor Pleiss	Utah Jazz	256.0
456	Jeff Withey	Utah Jazz	231.0
457	NaN	NaN	NaN

458 rows × 3 columns