

```
In [2]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

```
In [2]: df = pd.read_csv('sales.csv')
```

```
In [3]: df.head()
```

Out[3]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184

```
In [5]: df.head(n = 10)
```

Out[5]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184
5	Van Tuxwell	India	Smooth Sliky Salty	6-Jun-22	\$5,376	38
6	Oby Sorrel	UK	99% Dark & Pure	25-Jan-22	\$13,685	176
7	Gunar Cockshoot	Australia	After Nines	24-Mar-22	\$3,080	73
8	Jehu Rudeforth	New Zealand	50% Dark Bites	20-Apr-22	\$3,990	59
9	Brien Boise	Australia	99% Dark & Pure	4-Jul-22	\$2,835	102

```
In [6]: df.tail()
```

Out[6]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344

```
In [7]: df.tail(n = 10)
```

Out[7]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
1084	Roddy Speechley	India	50% Dark Bites	14-Mar-22	\$8,337	12
1085	Barr Faughny	New Zealand	99% Dark & Pure	24-May-22	\$8,134	195
1086	Dennison Crosswaite	Canada	Organic Choco Syrup	28-Jan-22	\$8,491	75
1087	Beverie Moffet	India	Almond Choco	24-May-22	\$3,066	96
1088	Brien Boise	Australia	Peanut Butter Cubes	19-Aug-22	\$301	205
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344

```
In [8]: df.head(-3)
```

Out[8]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184
...
1086	Dennison Crosswaite	Canada	Organic Choco Syrup	28-Jan-22	\$8,491	75
1087	Beverie Moffet	India	Almond Choco	24-May-22	\$3,066	96
1088	Brien Boise	Australia	Peanut Butter Cubes	19-Aug-22	\$301	205
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119

1091 rows × 6 columns

In [9]: `df.tail(-3)`

Out[9]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184
5	Van Tuxwell	India	Smooth Sliky Salty	6-Jun-22	\$5,376	38
6	Oby Sorrel	UK	99% Dark & Pure	25-Jan-22	\$13,685	176
7	Gunar Cockshoot	Australia	After Nines	24-Mar-22	\$3,080	73
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344

1091 rows x 6 columns

In [10]: `df.info`

Out[10]: <bound method DataFrame.info of

	Product	Date	Amount	\	Sales Person	Country
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	
...
...						
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	

Boxes Shipped

0	180
1	94
2	91
3	342
4	184
...	...
1089	323
1090	119
1091	217
1092	384
1093	344

[1094 rows x 6 columns]>

```
In [16]: df.columns
```

```
Out[16]: Index(['Sales Person', 'Country', 'Product', 'Date', 'Amount',
               'Boxes Shipped'],
              dtype='object')
```

```
In [19]: print(df)
```

t \	Sales Person	Country	Product	Date	Amount
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075

	Boxes Shipped
0	180
1	94
2	91
3	342
4	184
...	...
1089	323
1090	119
1091	217
1092	384
1093	344

[1094 rows x 6 columns]

```
In [20]: df['Sales Person']
```

```
Out[20]: 0      Jehu Rudeforth
1      Van Tuxwell
2      Gigi Bohling
3      Jan Morforth
4      Jehu Rudeforth
...
1089   Karlen McCaffrey
1090   Jehu Rudeforth
1091   Ches Bonnell
1092   Dotty Strutley
1093   Karlen McCaffrey
Name: Sales Person, Length: 1094, dtype: object
```

In [21]: `df[['Product' , 'Country']]`

Out[21]:

	Product	Country
0	Mint Chip Choco	UK
1	85% Dark Bars	India
2	Peanut Butter Cubes	India
3	Peanut Butter Cubes	Australia
4	Peanut Butter Cubes	UK
...
1089	Spicy Special Slims	Australia
1090	White Choc	USA
1091	Organic Choco Syrup	Canada
1092	Eclairs	India
1093	70% Dark Bites	India

1094 rows × 2 columns

In [22]: `df[df['Boxes Shipped'] > 30]`

Out[22]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344

976 rows × 6 columns

In [23]: `df.sort_values(by = 'Boxes Shipped')`

Out[23]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
831	Barr Faughny	Canada	White Choc	29-Mar-22	\$4,291	1
798	Mallorie Waber	India	Raspberry Choco	2-Mar-22	\$1,400	2
410	Mallorie Waber	UK	Mint Chip Choco	29-Jun-22	\$6,384	2
1013	Karlen McCaffrey	USA	White Choc	24-Aug-22	\$4,592	2
271	Dotty Strutley	Australia	Eclairs	26-Jan-22	\$6,979	3
...
1070	Oby Sorrel	Canada	Eclairs	19-May-22	\$6,111	591
769	Karlen McCaffrey	Canada	70% Dark Bites	24-Jun-22	\$7,714	597
852	Marney O'Brien	Canada	Caramel Stuffed Bars	23-Feb-22	\$1,372	614
730	Karlen McCaffrey	Australia	50% Dark Bites	17-Jan-22	\$6,678	708
1028	Van Tuxwell	Canada	Drinking Coco	15-Jun-22	\$4,900	709

1094 rows × 6 columns

In [24]: `df.sort_values(by = 'Boxes Shipped' , ascending = False)`

Out[24]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
1028	Van Tuxwell	Canada	Drinking Coco	15-Jun-22	\$4,900	709
730	Karlen McCaffrey	Australia	50% Dark Bites	17-Jan-22	\$6,678	708
852	Marney O'Brien	Canada	Caramel Stuffed Bars	23-Feb-22	\$1,372	614
769	Karlen McCaffrey	Canada	70% Dark Bites	24-Jun-22	\$7,714	597
1070	Oby Sorrel	Canada	Eclairs	19-May-22	\$6,111	591
...
271	Dotty Strutley	Australia	Eclairs	26-Jan-22	\$6,979	3
410	Mallorie Waber	UK	Mint Chip Choco	29-Jun-22	\$6,384	2
798	Mallorie Waber	India	Raspberry Choco	2-Mar-22	\$1,400	2
1013	Karlen McCaffrey	USA	White Choc	24-Aug-22	\$4,592	2
831	Barr Faughny	Canada	White Choc	29-Mar-22	\$4,291	1

1094 rows × 6 columns

In [25]: `df.groupby('Country').mean()`

Out[25]:

Boxes Shipped	
Country	
Australia	159.253659
Canada	178.405714
India	160.163043
New Zealand	153.641618
UK	170.028090
USA	149.854749

In [27]: `df.dropna()`

Out[27]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344

1094 rows × 6 columns

In [28]: `df.fillna(value = 0)`

Out[28]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344

1094 rows × 6 columns

In [29]: `df.fillna(df.mean())`

Out[29]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344

1094 rows × 6 columns

In [33]: `df['Boxes Shipped'] = df['Boxes Shipped'].astype(str)`


```
In [34]: df['Boxes Shipped'].apply(len)
```

```
Out[34]: 0      3
         1      2
         2      2
         3      3
         4      3
         ..
        1089    3
        1090    3
        1091    3
        1092    3
        1093    3
        Name: Boxes Shipped, Length: 1094, dtype: int64
```

```
In [37]: df.describe()
```

```
Out[37]:
```

	Sales Person	Country	Product	Date	Amount	Boxes Shipped	age
count	1094	1094	1094	1094	1094	1094	1094
unique	25	6	22	168	827	385	385
top	Kelci Walkden	Australia	50% Dark Bites	13-Jan-22	\$2,317	24	24
freq	54	205	60	16	5	10	10

```
In [39]: df["Boxes Shipped"].mean()
```

```
Out[39]: inf
```

```
In [43]: df["age"].mean()
```

```
Out[43]: inf
```

In [45]: `df.drop_duplicates()`

Out[45]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped	age
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184	184
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344	344

1094 rows × 7 columns

In [46]: `df.drop_duplicates(subset = ['Product' , 'Amount'])`

Out[46]:

	Sales Person	Country	Product	Date	Amount	Boxes Shipped	age
0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180	180
1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94	94
2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91	91
3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342	342
4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184	184
...
1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323	323
1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119	119
1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217	217
1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384	384
1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344	344

1079 rows × 7 columns

In [47]: `df.duplicated()`

Out[47]:

```

0      False
1      False
2      False
3      False
4      False
...
1089   False
1090   False
1091   False
1092   False
1093   False
Length: 1094, dtype: bool

```

In [48]: `df[df.duplicated()]`

Out[48]:

Sales Person	Country	Product	Date	Amount	Boxes Shipped	age
--------------	---------	---------	------	--------	---------------	-----

In [49]: `df.reset_index()`

Out[49]:

	index	Sales Person	Country	Product	Date	Amount	Boxes Shipped	age
0	0	Jehu Rudeforth	UK	Mint Chip Choco	4-Jan-22	\$5,320	180	180
1	1	Van Tuxwell	India	85% Dark Bars	1-Aug-22	\$7,896	94	94
2	2	Gigi Bohling	India	Peanut Butter Cubes	7-Jul-22	\$4,501	91	91
3	3	Jan Morforth	Australia	Peanut Butter Cubes	27-Apr-22	\$12,726	342	342
4	4	Jehu Rudeforth	UK	Peanut Butter Cubes	24-Feb-22	\$13,685	184	184
...
1089	1089	Karlen McCaffrey	Australia	Spicy Special Slims	17-May-22	\$4,410	323	323
1090	1090	Jehu Rudeforth	USA	White Choc	7-Jun-22	\$6,559	119	119
1091	1091	Ches Bonnell	Canada	Organic Choco Syrup	26-Jul-22	\$574	217	217
1092	1092	Dotty Strutley	India	Eclairs	28-Jul-22	\$2,086	384	384
1093	1093	Karlen McCaffrey	India	70% Dark Bites	23-May-22	\$5,075	344	344

1094 rows × 8 columns

```
In [50]: df.select_dtypes(exclude = ['object'])
```

Out[50]:

```
_____
0
1
2
3
4
...
1089
1090
1091
1092
1093

1094 rows × 0 columns
```

```
In [51]: df.select_dtypes(include=['int', 'float'])
```

Out[51]:

```
_____
0
1
2
3
4
...
1089
1090
1091
1092
1093

1094 rows × 0 columns
```

```
In [57]: df = pd.read_csv('Banglorefiles.csv')
```

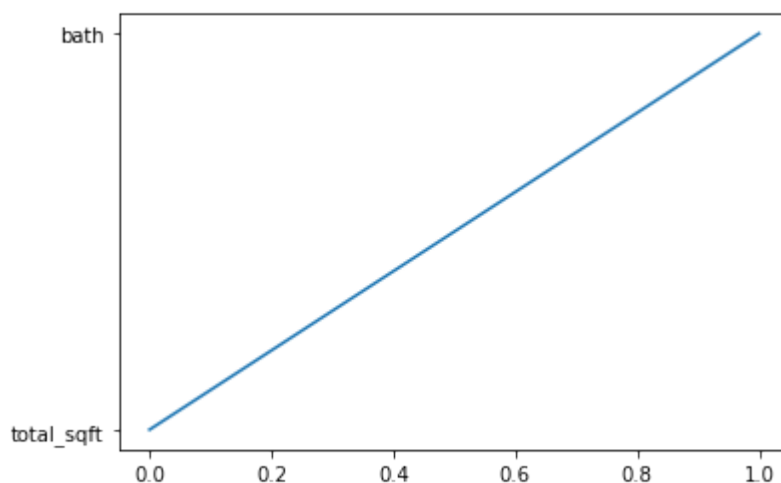
In [60]: `df.head()`

Out[60]:

	area_type	availability	location	size	society	total_sqft	bath	balcony	p
0	Super built-up Area	19-Dec	Electronic City Phase II	2 BHK	Coomee	1056	2.0	1.0	3
1	Plot Area	Ready To Move	Chikka Tirupathi	4 Bedroom	Theanmp	2600	5.0	3.0	12
2	Built-up Area	Ready To Move	Uttarahalli	3 BHK	NaN	1440	2.0	3.0	6
3	Super built-up Area	Ready To Move	Lingadheeranahalli	3 BHK	Soiewre	1521	3.0	1.0	9
4	Super built-up Area	Ready To Move	Kothanur	2 BHK	NaN	1200	2.0	1.0	5

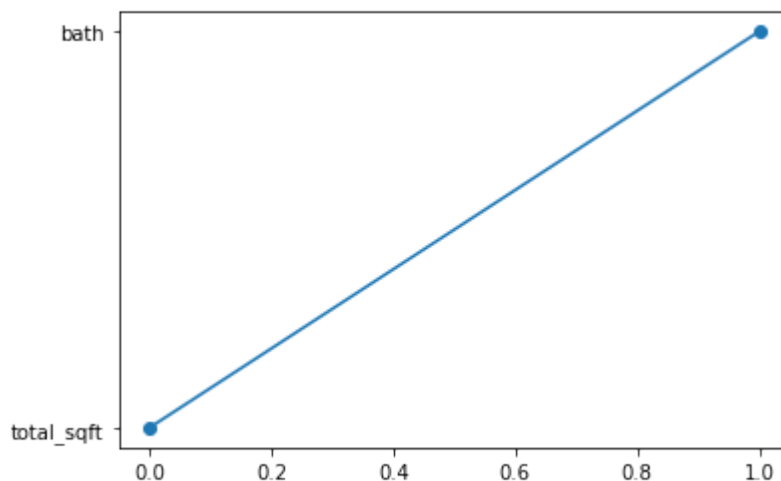
In [61]: `plt.plot(['total_sqft' , 'bath'])`

Out[61]: [`<matplotlib.lines.Line2D at 0x2d658a67400>`]



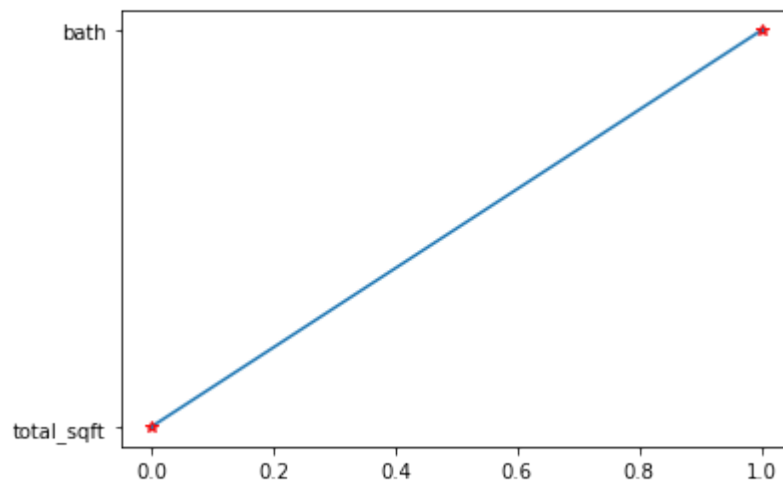
In [63]: `plt.plot(['total_sqft' , 'bath'], marker = 'o')`

Out[63]: [`<matplotlib.lines.Line2D at 0x2d658aba8b0>`]

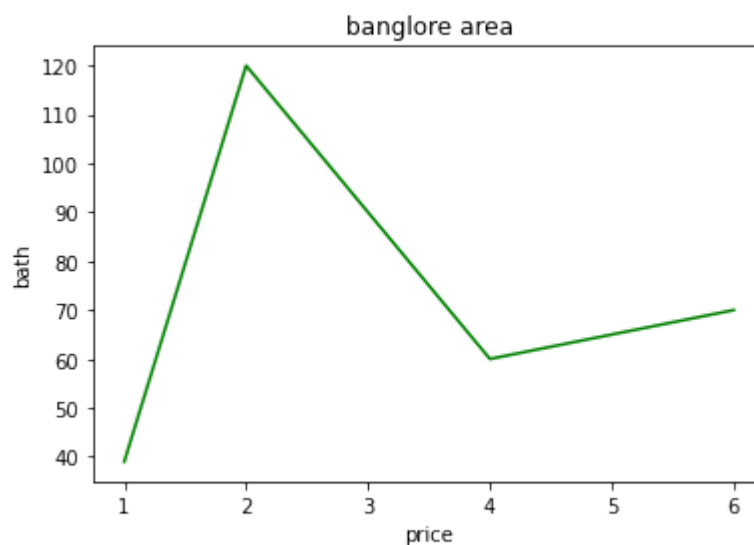


```
In [67]: plt.plot(['total_sqft' , 'bath'], marker = '*' , mec = 'r')
```

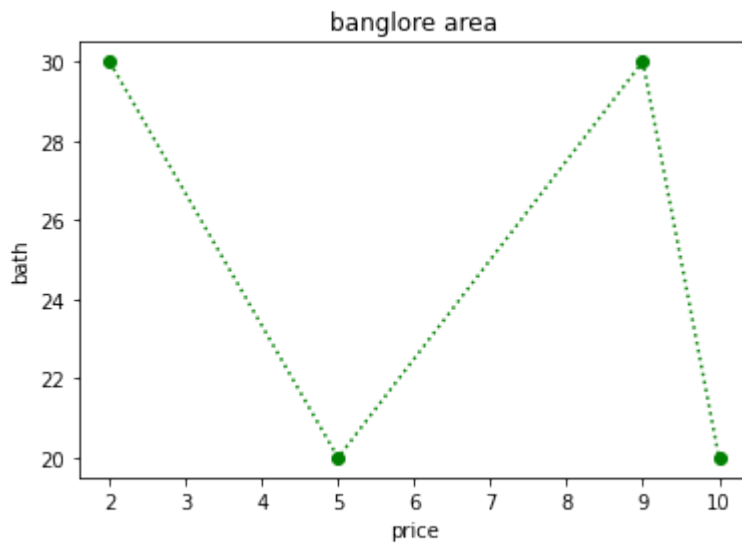
```
Out[67]: [<matplotlib.lines.Line2D at 0x2d658aee370>]
```



```
In [76]: x = [1.0 , 2.0 , 4.0 , 6.0]
y = [39 , 120 , 60 , 70]
plt.plot(x , y , color = 'green')
plt.xlabel('price')
plt.ylabel('bath')
plt.title('banglore area')
plt.show()
```



```
In [81]: x = [2.0 , 5.0 , 9.0 , 10.0]
y = [30 , 20 , 30 , 20]
plt.plot(x , y , color = 'green' , ls = 'dotted' , marker = 'o')
plt.xlabel('price')
plt.ylabel('bath')
plt.title('banglore area')
plt.show()
```

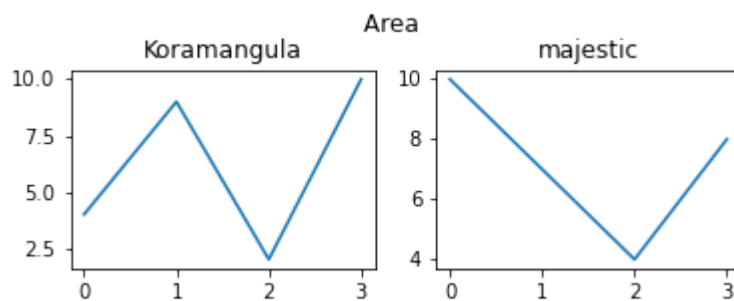


In [110]:

```
x=np.array([0,1,2,3])
y=np.array([4,9,2,10])
plt.subplot(2,2,1)
plt.plot(x,y)
plt.title("Koramangula")

x=np.array([0,1,2,3])
y=np.array([10,7,4,8])
plt.subplot(2,2,2)
plt.plot(x,y)
plt.title("majestic")

plt.suptitle("Area ")
plt.show()
```



```

In [5]: x=np.array([0,1,2,3])
y=np.array([4,9,2,10])
plt.subplot(2,2,1)
plt.plot(x,y)
plt.title("Chandranapeta")

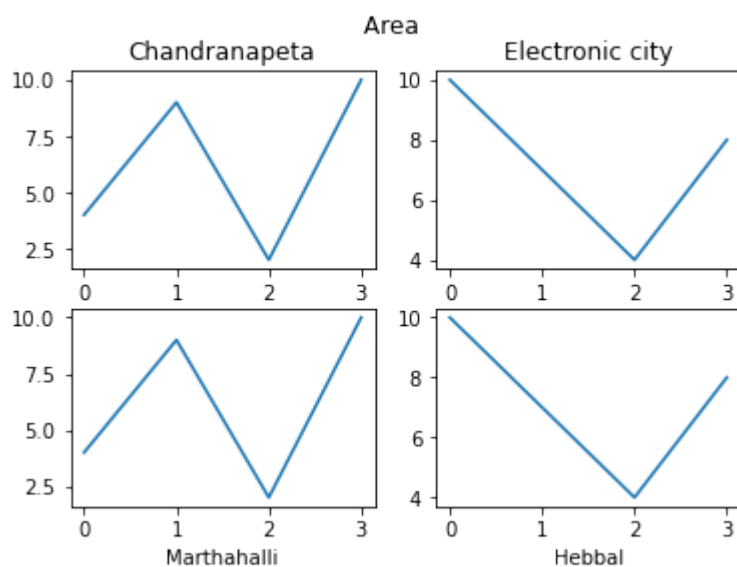
x=np.array([0,1,2,3])
y=np.array([10,7,4,8])
plt.subplot(2,2,2)
plt.plot(x,y)
plt.title("Electronic city")

x=np.array([0,1,2,3])
y=np.array([4,9,2,10])
plt.subplot(2,2,3)
plt.plot(x,y)
plt.xlabel("Marthahalli")

x=np.array([0,1,2,3])
y=np.array([10,7,4,8])
plt.subplot(2,2,4)
plt.plot(x,y)
plt.xlabel("Hebbal")

plt.suptitle("Area ")
plt.show()

```



```

In [6]: b = np.array([[[1,2],[3,4]],[[5,6],[7,8]]])
print(b)

[[[1 2]
  [3 4]]

 [[5 6]
  [7 8]]]

```


In [7]: `np.identity(5)`

Out[7]: `array([[1., 0., 0., 0., 0.],
[0., 1., 0., 0., 0.],
[0., 0., 1., 0., 0.],
[0., 0., 0., 1., 0.],
[0., 0., 0., 0., 1.]])`

In []: