

```
In [1]: pip install openpyxl
```

Requirement already satisfied: openpyxl in /srv/conda/envs/notebook/lib/python3.7/site-packages (3.0.7)
Requirement already satisfied: et-xmlfile in /srv/conda/envs/notebook/lib/python3.7/site-packages (from openpyxl) (1.1.0)
Note: you may need to restart the kernel to use updated packages.

```
In [2]: import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

```
In [3]: data=pd.read_excel("Top 10 Chocolate Bars.xlsx")
```

```
In [4]: data
```

Out[4]:

	Brand	Age Group	Rank
0	Mars	18-24	1.0
1	Galaxy	18-24	2.0
2	Dairy Milk	18-24	3.0
3	Snickers	18-24	4.0
4	Twix	18-24	5.0
5	Wispa	18-24	6.0
6	KitKat	18-24	7.0
7	Double Decker	18-24	8.0
8	Twirl	18-24	9.0
9	Crunchie	18-24	10.0
10	Boost	18-24	NaN
11	Bounty	18-24	NaN
12	Picnic	18-24	NaN
13	Mars	35-44	1.0
14	Galaxy	35-44	2.0
15	Snickers	35-44	3.0
16	Dairy Milk	35-44	4.0
17	Twix	35-44	5.0
18	Wispa	35-44	6.0
19	Double Decker	35-44	7.0
20	Boost	35-44	8.0
21	Twirl	35-44	9.0
22	KitKat	35-44	10.0
23	Bounty	35-44	NaN
24	Crunchie	35-44	NaN
25	Picnic	35-44	NaN
26	Mars	65+	1.0
27	Galaxy	65+	2.0
28	Snickers	65+	3.0
29	Twix	65+	4.0
30	KitKat	65+	5.0
31	Crunchie	65+	6.0
32	Bounty	65+	7.0
33	Picnic	65+	8.0
34	Twirl	65+	9.0
35	Dairy Milk	65+	10.0
36	Boost	65+	NaN
37	Double Decker	65+	NaN
38	Wispa	65+	NaN

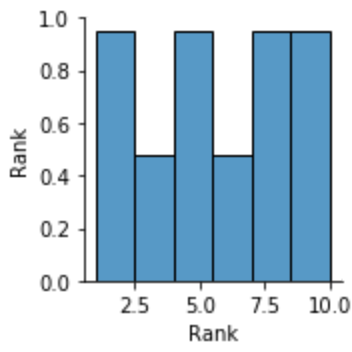
```
In [5]: df=pd.DataFrame(data)
```

```
In [6]: print(data)
```

	Brand	Age	Group	Rank
0	Mars	18-24	18-24	1.0
1	Galaxy	18-24	18-24	2.0
2	Dairy Milk	18-24	18-24	3.0
3	Snickers	18-24	18-24	4.0
4	Twix	18-24	18-24	5.0
5	Wispa	18-24	18-24	6.0
6	KitKat	18-24	18-24	7.0
7	Double Decker	18-24	18-24	8.0
8	Twirl	18-24	18-24	9.0
9	Crunchie	18-24	18-24	10.0
10	Boost	18-24	18-24	NaN
11	Bounty	18-24	18-24	NaN
12	Picnic	18-24	18-24	NaN
13	Mars	35-44	35-44	1.0
14	Galaxy	35-44	35-44	2.0
15	Snickers	35-44	35-44	3.0
16	Dairy Milk	35-44	35-44	4.0
17	Twix	35-44	35-44	5.0
18	Wispa	35-44	35-44	6.0
19	Double Decker	35-44	35-44	7.0
20	Boost	35-44	35-44	8.0
21	Twirl	35-44	35-44	9.0
22	KitKat	35-44	35-44	10.0
23	Bounty	35-44	35-44	NaN
24	Crunchie	35-44	35-44	NaN
25	Picnic	35-44	35-44	NaN
26	Mars	65+	65+	1.0
27	Galaxy	65+	65+	2.0
28	Snickers	65+	65+	3.0
29	Twix	65+	65+	4.0
30	KitKat	65+	65+	5.0
31	Crunchie	65+	65+	6.0
32	Bounty	65+	65+	7.0
33	Picnic	65+	65+	8.0
34	Twirl	65+	65+	9.0
35	Dairy Milk	65+	65+	10.0
36	Boost	65+	65+	NaN
37	Double Decker	65+	65+	NaN
38	Wispa	65+	65+	NaN

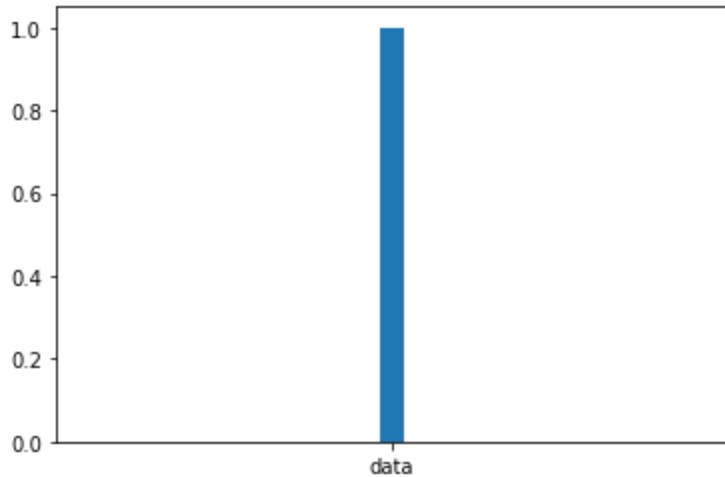
```
In [7]: sns.pairplot(data)
```

Out[7]: <seaborn.axisgrid.PairGrid at 0x7f6817f4c690>



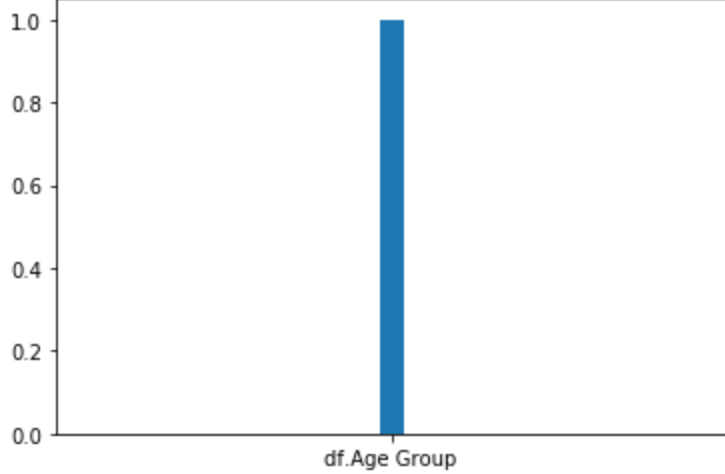
```
In [9]: plt.hist('data',bins=25)
```

Out[9]: (array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 1., 0., 0., 0., 0.,
0., 0., 0., 0., 0., 0., 0., 0.]),
array([-0.5, -0.46, -0.42, -0.38, -0.34, -0.3, -0.26, -0.22, -0.18,
-0.14, -0.1, -0.06, -0.02, 0.02, 0.06, 0.1, 0.14, 0.18,
0.22, 0.26, 0.3, 0.34, 0.38, 0.42, 0.46, 0.5]]),
<a list of 25 Patch objects>)

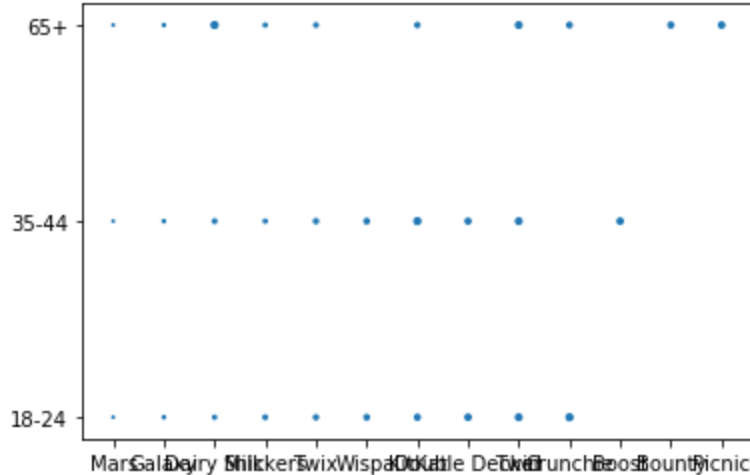


```
In [10]: plt.hist('df.Age Group',bins=25)
```

Out[10]: (array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 1., 0., 0., 0., 0.,
0., 0., 0., 0., 0., 0., 0., 0.]),
array([-0.5, -0.46, -0.42, -0.38, -0.34, -0.3, -0.26, -0.22, -0.18,
-0.14, -0.1, -0.06, -0.02, 0.02, 0.06, 0.1, 0.14, 0.18,
0.22, 0.26, 0.3, 0.34, 0.38, 0.42, 0.46, 0.5]]),
<a list of 25 Patch objects>)



```
In [14]: fig,ax=plt.subplots()
ax.scatter(df['Brand'],df['Age Group'],df['Rank'])
plt.show()
```



```
In [ ]:
```