In [1]:

```
import pandas as pd
from scipy import stats
import numpy as np
from matplotlib import pyplot as plt
```

Importing the File

In [3]:

```
ques_7 = pd.read_csv('Q7.csv')
ques_7
```

Out[3]:

	Unnamed: 0	Points	Score	Weigh
0	Mazda RX4	3.90	2.620	16.46
1	Mazda RX4 Wag	3.90	2.875	17.02
2	Datsun 710	3.85	2.320	18.61
3	Hornet 4 Drive	3.08	3.215	19.44
4	Hornet Sportabout	3.15	3.440	17.02
5	Valiant	2.76	3.460	20.22
6	Duster 360	3.21	3.570	15.84
7	Merc 240D	3.69	3.190	20.00
8	Merc 230	3.92	3.150	22.90
9	Merc 280	3.92	3.440	18.30
10	Merc 280C	3.92	3.440	18.90
11	Merc 450SE	3.07	4.070	17.40
12	Merc 450SL	3.07	3.730	17.60
13	Merc 450SLC	3.07	3.780	18.00
14	Cadillac Fleetwood	2.93	5.250	17.98
15	Lincoln Continental	3.00	5.424	17.82
16	Chrysler Imperial	3.23	5.345	17.42
17	Fiat 128	4.08	2.200	19.47
18	Honda Civic	4.93	1.615	18.52
19	Toyota Corolla	4.22	1.835	19.90
20	Toyota Corona	3.70	2.465	20.01
21	Dodge Challenger	2.76	3.520	16.87
22	AMC Javelin	3.15	3.435	17.30
23	Camaro Z28	3.73	3.840	15.41
24	Pontiac Firebird	3.08	3.845	17.05
25	Fiat X1-9	4.08	1.935	18.90
26	Porsche 914-2	4.43	2.140	16.70
27	Lotus Europa	3.77	1.513	16.90
28	Ford Pantera L	4.22	3.170	14.50
29	Ferrari Dino	3.62	2.770	15.50
30	Maserati Bora	3.54	3.570	14.60
31	Volvo 142E	4.11	2.780	18.60

In [12]:

```
ques_7.describe(include='all')
```

Out[12]:

	Unnamed: 0	Points	Score	Weigh
count	32	32.000000	32.000000	32.000000
unique	32	NaN	NaN	NaN
top	Valiant	NaN	NaN	NaN
freq	1	NaN	NaN	NaN
mean	NaN	3.596563	3.217250	17.848750
std	NaN	0.534679	0.978457	1.786943
min	NaN	2.760000	1.513000	14.500000
25%	NaN	3.080000	2.581250	16.892500
50%	NaN	3.695000	3.325000	17.710000
75%	NaN	3.920000	3.610000	18.900000
max	NaN	4.930000	5.424000	22.900000

Mean Calculation

In [22]:

```
ques_7_points =ques_7['Points'].mean()
round(ques_7_points,4)
```

Out[22]:

```
3.5966
```

In [23]:

```
ques_7_score=ques_7['Score'].mean()
round(ques_7_score,4)
```

Out[23]:

```
3.2172
```

In [24]:

```
ques_7_weigh=ques_7['Weigh'].mean()
round(ques_7_weigh,4)
```

Out[24]:

```
17.8488
```

Median Calcualtion

In [26]:

```
ques_7_points = ques_7['Points'].median()
round(ques_7_points,4)
```

Out[26]:

```
3.695
```

In [27]:

```
ques_7_score = ques_7['Score'].median()
round(ques_7_score,4)
```

Out[27]:

```
3.325
```

In [28]:

```
ques_7_weigh = ques_7['Weigh'].median()
round(ques_7_weigh,4)
```

Out[28]:

```
17.71
```

Mode Calculation

In [51]:

```
points = ques_7['Points'].mode()
points
```

Out[51]:

```
0    3.07
1    3.92
dtype: float64
```

In [53]:

```
score = ques_7['Score'].mode()
score
```

Out[53]:

```
0    3.44
dtype: float64
```

In [79]:

```
weigh = ques_7['Weigh'].mode()
weigh
```

Out[79]:

```
0    17.02
1    18.90
dtype: float64
```

Variance calculation

In [43]:

```
ques_7_points = ques_7['Points'].var()
round(ques_7_points,4)
```

Out[43]:

```
0.2859
```

In [44]:

```
ques_7_score = ques_7['Score'].var()
round(ques_7_score,4)
```

Out[44]:

```
0.9574
```

In [45]:

```
ques_7_weigh = ques_7['Weigh'].var()
round(ques_7_weigh,4)
```

Out[45]:

```
3.1932
```

Standard deviation calculation

In [80]:

```
round(ques_7['Points'].std(),4)
```

Out[80]:

```
0.5347
```

In [81]:

```
round(ques_7['Score'].std(),4)
```

Out[81]:

```
0.9785
```

In [82]:

```
round(ques_7['Weigh'].std(),4)
```

Out[82]:

```
1.7869
```

Range Calculation

In [75]:

```
print('Range is : ', ques_7.Points.min(), ques_7.Points.max()) # Range for Points Column
```

```
Range is :  2.76 4.93
```

In [76]:

```
print ('Range is : ', ques_7.Score.min(),ques_7.Score.max()) # Range for Score Column
```

```
Range is :  1.513 5.424
```

In [77]:

```
print('Range is : ', ques_7.Weigh.min(), ques_7.Weigh.max()) # Range for Weigh Column
```

```
Range is :  14.5 22.9
```

In [ ]:

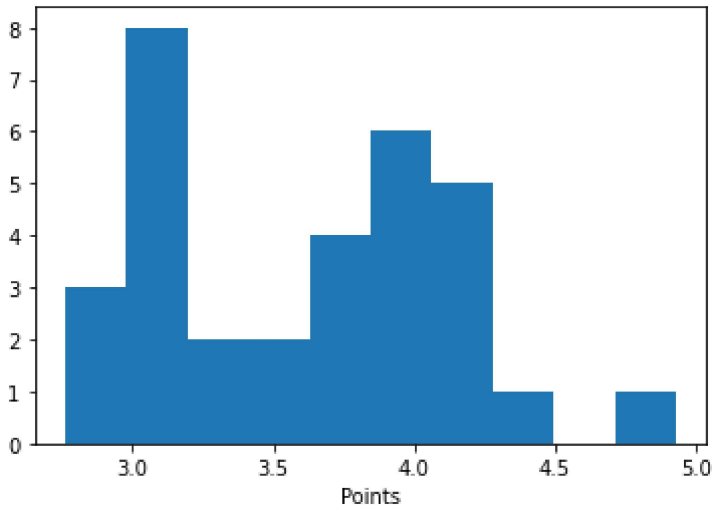
```

```

Inferences data

In [11]:

```
plt.hist(x='Points', data = ques_7)
plt.xlabel('Points')
plt.show()
```



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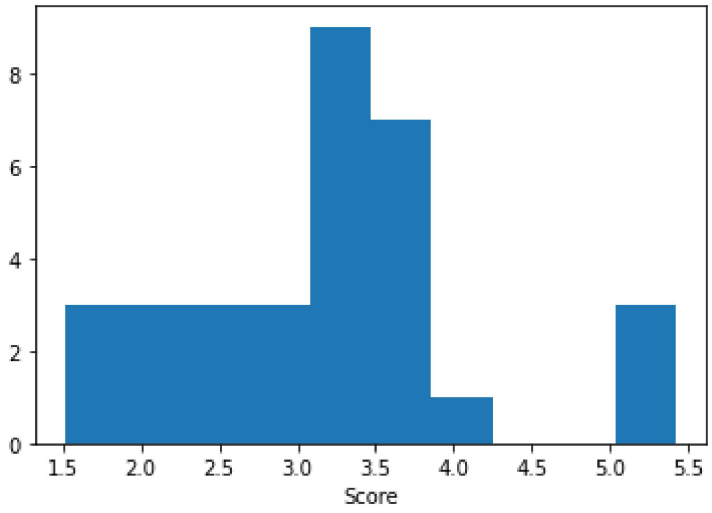
In [9]:

```
plt.hist(x='Score' , data= ques_7)
plt.xlabel('Score')
plt.show()
```



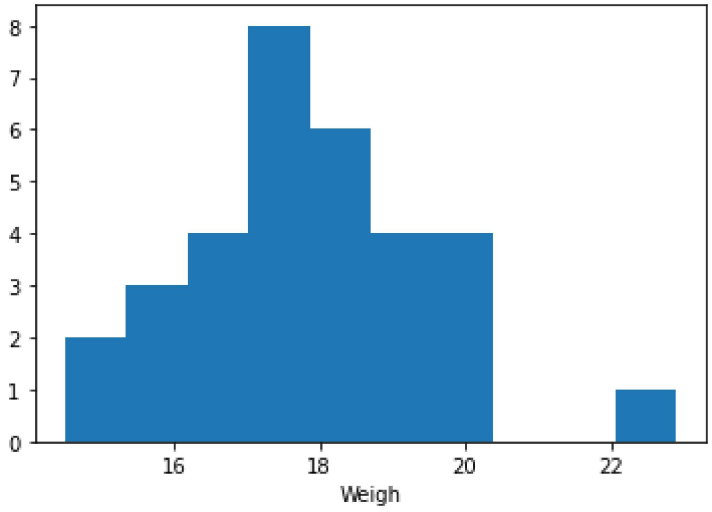
In [ ]:

```

```

In [10]:

```
plt.hist(x='Weigh' , data = ques_7)
plt.xlabel('Weigh')
plt.show()
```



Inferences data : a) Point dataset : The dataset has Right skewed. Concentrated on Median value. There is no Outlier. b) Score dataset : The dataset has Left skewed. Concentrated on Median value. There are 3 outliers :5.250 , 5.424 , 5.345 c) Weigh dataset : The dataset has Left skewed. Concentrated on Median value. There is 1 outlier : 22.90

In [ ]:

```

```