In [2]:
```
import pandas as pd
```

In [3]:
```
import numpy as np
```

In [4]:
```
df=pd.read_csv(r'E:\assig_&_cont\Internship\Fruits.csv')
```

In [5]:
```
df.head()
```

Out[5]:

	Fruit Category	Fruit Name	Fruit Weight	Fruit Width	Fruit Length	Fruit Colour Score
0	1	Apple	192	8.4	7.3	0.55
1	1	Apple	180	8.0	6.8	0.59
2	1	Apple	176	7.4	7.2	0.60
3	1	Apple	178	7.1	7.8	0.92
4	1	Apple	172	7.4	7.0	0.89

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

Out[6]:

	Fruit Category	Fruit Name	Fruit Weight	Fruit Width	Fruit Length	Fruit Colour Score
54	3	Lemon	58	6.1	8.5	0.71
55	3	Lemon	58	6.3	7.7	0.72
56	3	Lemon	58	5.9	8.1	0.73
57	3	Lemon	76	6.5	8.5	0.72
58	3	Lemon	59	6.1	8.1	0.70

In [7]:
```
df.describe()
```

Out[7]:

	Fruit Category	Fruit Weight	Fruit Width	Fruit Length	Fruit Colour Score
count	59.000000	59.000000	59.000000	59.000000	59.000000
mean	1.949153	141.796610	7.105085	7.693220	0.762881
std	0.775125	67.335951	0.816938	1.361017	0.076857
min	1.000000	58.000000	5.800000	4.000000	0.550000
25%	1.000000	82.000000	6.600000	7.200000	0.720000
50%	2.000000	154.000000	7.200000	7.600000	0.750000
75%	3.000000	167.000000	7.500000	8.200000	0.810000
max	3.000000	362.000000	9.600000	10.500000	0.930000

In [18]:
```
df.corr()
```

Out[18]:

	Fruit Category	Fruit Weight	Fruit Width	Fruit Length	Fruit Colour Score
Fruit Category	1.000000	-0.518165	-0.440674	0.413150	-0.321638
Fruit Weight	-0.518165	1.000000	0.884415	0.157620	0.125413
Fruit Width	-0.440674	0.884415	1.000000	0.396848	-0.076576
Fruit Length	0.413150	0.157620	0.396848	1.000000	-0.247047
Fruit Colour Score	-0.321638	0.125413	-0.076576	-0.247047	1.000000

In [8]:
```
df.columns
```

Out[8]:
```
Index(['Fruit Category', 'Fruit Name', 'Fruit Weight', 'Fruit Width',
       'Fruit Length', 'Fruit Colour Score'],
      dtype='object')
```

In [9]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 59 entries, 0 to 58
Data columns (total 6 columns):
 #   Column              Non-Null Count  Dtype  
---  ------              --------------  -----  
 0   Fruit Category      59 non-null     int64  
 1   Fruit Name          59 non-null     object 
 2   Fruit Weight        59 non-null     int64  
 3   Fruit Width         59 non-null     float64
 4   Fruit Length        59 non-null     float64
 5   Fruit Colour Score  59 non-null     float64
dtypes: float64(3), int64(2), object(1)
memory usage: 2.9+ KB
```

In [10]:
```
df.shape
```

Out[10]:
```
(59, 6)
```

In [11]:
```
df.isnull()
```

Out[11]:

	Fruit Category	Fruit Name	Fruit Weight	Fruit Width	Fruit Length	Fruit Colour Score
0	False	False	False	False	False	False
1	False	False	False	False	False	False
2	False	False	False	False	False	False
3	False	False	False	False	False	False
4	False	False	False	False	False	False
5	False	False	False	False	False	False
6	False	False	False	False	False	False
7	False	False	False	False	False	False
8	False	False	False	False	False	False
9	False	False	False	False	False	False
10	False	False	False	False	False	False
11	False	False	False	False	False	False
12	False	False	False	False	False	False
13	False	False	False	False	False	False
14	False	False	False	False	False	False
15	False	False	False	False	False	False
16	False	False	False	False	False	False
17	False	False	False	False	False	False
18	False	False	False	False	False	False
19	False	False	False	False	False	False
20	False	False	False	False	False	False
21	False	False	False	False	False	False
22	False	False	False	False	False	False
23	False	False	False	False	False	False
24	False	False	False	False	False	False
25	False	False	False	False	False	False
26	False	False	False	False	False	False
27	False	False	False	False	False	False
28	False	False	False	False	False	False
29	False	False	False	False	False	False
30	False	False	False	False	False	False
31	False	False	False	False	False	False
32	False	False	False	False	False	False
33	False	False	False	False	False	False

	Fruit Category	Fruit Name	Fruit Weight	Fruit Width	Fruit Length	Fruit Colour Score
34	False	False	False	False	False	False
35	False	False	False	False	False	False
36	False	False	False	False	False	False
37	False	False	False	False	False	False
38	False	False	False	False	False	False
39	False	False	False	False	False	False
40	False	False	False	False	False	False
41	False	False	False	False	False	False
42	False	False	False	False	False	False
43	False	False	False	False	False	False
44	False	False	False	False	False	False
45	False	False	False	False	False	False
46	False	False	False	False	False	False
47	False	False	False	False	False	False
48	False	False	False	False	False	False
49	False	False	False	False	False	False
50	False	False	False	False	False	False
51	False	False	False	False	False	False
52	False	False	False	False	False	False
53	False	False	False	False	False	False
54	False	False	False	False	False	False
55	False	False	False	False	False	False
56	False	False	False	False	False	False
57	False	False	False	False	False	False
58	False	False	False	False	False	False

In [12]:
```
df.isnull().sum()#no any missing value availaible
```

Out[12]:
```
Fruit Category        0
Fruit Name            0
Fruit Weight          0
Fruit Width           0
Fruit Length          0
Fruit Colour Score    0
dtype: int64
```

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

Out[13]:
```
Fruit Category          int64
Fruit Name             object
Fruit Weight            int64
Fruit Width           float64
Fruit Length          float64
Fruit Colour Score    float64
dtype: object
```

In [14]:
```
df.dropna(inplace=True)#for removing all missing values
```

In [15]:
```
df['Fruit Name']=df['Fruit Name'].astype('string')
```

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

Out[16]:
```
Fruit Category          int64
Fruit Name             string
Fruit Weight            int64
Fruit Width           float64
Fruit Length          float64
Fruit Colour Score    float64
dtype: object
```

In [17]:
```
pd.get_dummies(df['Fruit Name'])#Turn categorial variables into quantitative vari
```

Out[17]:

	Apple	Lemon	Orange
0	1	0	0
1	1	0	0
2	1	0	0
3	1	0	0
4	1	0	0
5	1	0	0
6	1	0	0
7	1	0	0
8	1	0	0
9	1	0	0
10	1	0	0
11	1	0	0
12	1	0	0
13	1	0	0
14	1	0	0
15	1	0	0
16	1	0	0
17	1	0	0
18	1	0	0
19	0	0	1
20	0	0	1
21	0	0	1
22	0	0	1
23	0	0	1
24	0	0	1
25	0	0	1
26	0	0	1
27	0	0	1
28	0	0	1
29	0	0	1
30	0	0	1
31	0	0	1
32	0	0	1
33	0	0	1

	Apple	Lemon	Orange
34	0	0	1
35	0	0	1
36	0	0	1
37	0	0	1
38	0	0	1
39	0	0	1
40	0	0	1
41	0	0	1
42	0	0	1
43	0	1	0
44	0	1	0
45	0	1	0
46	0	1	0
47	0	1	0
48	0	1	0
49	0	1	0
50	0	1	0
51	0	1	0
52	0	1	0
53	0	1	0
54	0	1	0
55	0	1	0
56	0	1	0
57	0	1	0
58	0	1	0

In [ ]:

In [ ]: