

```
In [1]: import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [2]: df=pd.read_csv("C:/Users/ADMIN/Desktop/AirQuality.csv",sep=';')
df
```

Out[2]:

	Date	Time	CO(GT)	PT08.S1(CO)	NMHC(GT)	C6H6(GT)	PT08.S2(NMHC)	NOx(GT)
0	10/03/2004	18.00.00	2,6	1360.0	150.0	11,9	1046.0	166.0
1	10/03/2004	19.00.00	2	1292.0	112.0	9,4	955.0	103.0
2	10/03/2004	20.00.00	2,2	1402.0	88.0	9,0	939.0	131.0
3	10/03/2004	21.00.00	2,2	1376.0	80.0	9,2	948.0	172.0
4	10/03/2004	22.00.00	1,6	1272.0	51.0	6,5	836.0	131.0
...
9466	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9467	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9468	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9469	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
9470	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

9471 rows × 17 columns



```
In [3]: labels=['CO', 'NO2', 'NOx']
labels
```

Out[3]: ['CO', 'NO2', 'NOx']

```
In [4]: size=[df['PT08.S1(CO)'].mean(),df['NO2(GT)'].mean(),df['NOx(GT)'].mean()]
size
```

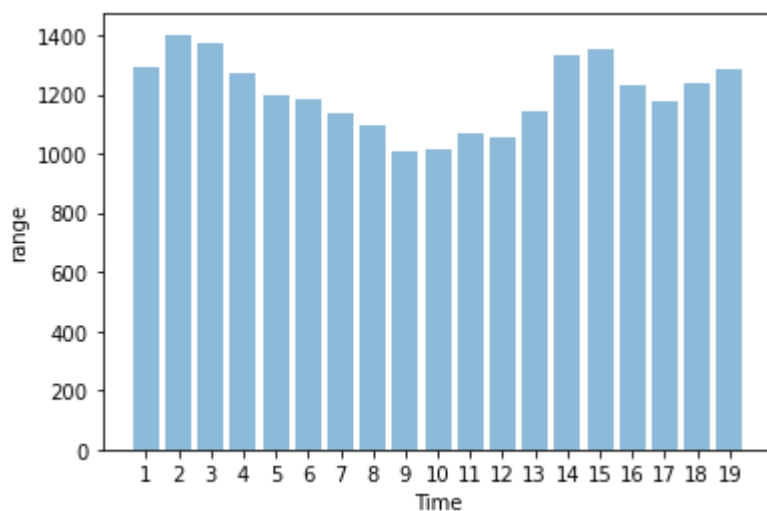
Out[4]: [1048.9900609169606, 58.14887250187026, 168.6169712514695]

```
In [5]: color=['red','gold','brown']
        explode=(0.1,0,0,0)
        plt.pie(size,labels=labels,colors=color)
```

```
Out[5]: ([<matplotlib.patches.Wedge at 0x26108eb8100>,
          <matplotlib.patches.Wedge at 0x26108ecd3d0>,
          <matplotlib.patches.Wedge at 0x26108ecd8b0>],
          [Text(-0.9329034591223914, 0.5828302805770105, 'CO'),
           Text(0.6185191854702803, -0.9096340017859827, 'NO2'),
           Text(1.006528126879197, -0.4437354277055815, 'NOx')])
```



```
In [6]: import numpy as np
        h=df.iloc[1:20,3]
        y_pos=np.arange(len(h))
        v=range(1,20)
        plt.bar(y_pos,h,align='center',alpha=0.5)
        plt.xticks(y_pos,v)
        plt.xlabel('Time')
        plt.ylabel('range')
        plt.show()
```



```
In [7]: data=pd.read_csv('C:/Users/ADMIN/Contacts/Downloads/Heart.csv')
data
```

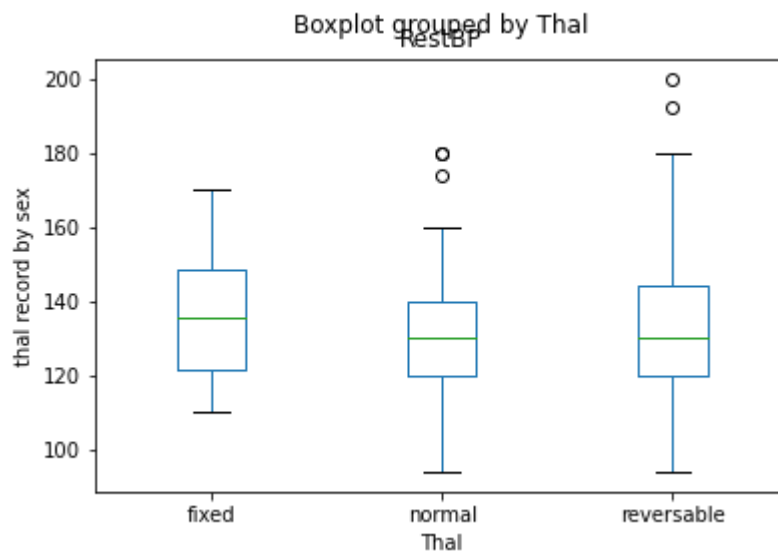
Out[7]:

	Unnamed: 0	Age	Sex	ChestPain	RestBP	Chol	Fbs	RestECG	MaxHR	ExAng	Oldpeak
0	1	63	1	typical	145	233	1	2	150	0	2.3
1	2	67	1	asymptomatic	160	286	0	2	108	1	1.5
2	3	67	1	asymptomatic	120	229	0	2	129	1	2.6
3	4	37	1	nonanginal	130	250	0	0	187	0	3.5
4	5	41	0	nontypical	130	204	0	2	172	0	1.4
...
298	299	45	1	typical	110	264	0	0	132	0	1.2
299	300	68	1	asymptomatic	144	193	1	0	141	0	3.4
300	301	57	1	asymptomatic	130	131	0	0	115	1	1.2
301	302	57	0	nontypical	130	236	0	2	174	0	0.0
302	303	38	1	nonanginal	138	175	0	0	173	0	0.0

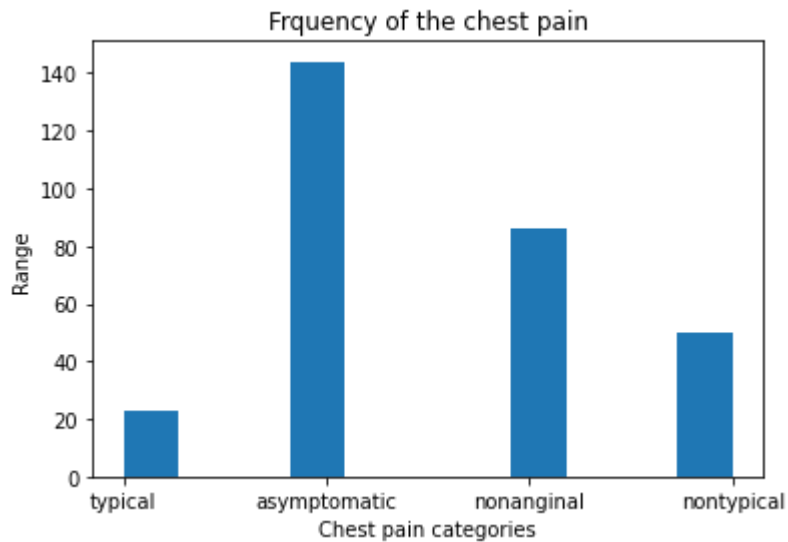
303 rows × 15 columns

```
In [8]: data.boxplot(by='Thal',column=['RestBP'],grid=False)
plt.ylabel("thal record by sex")
```

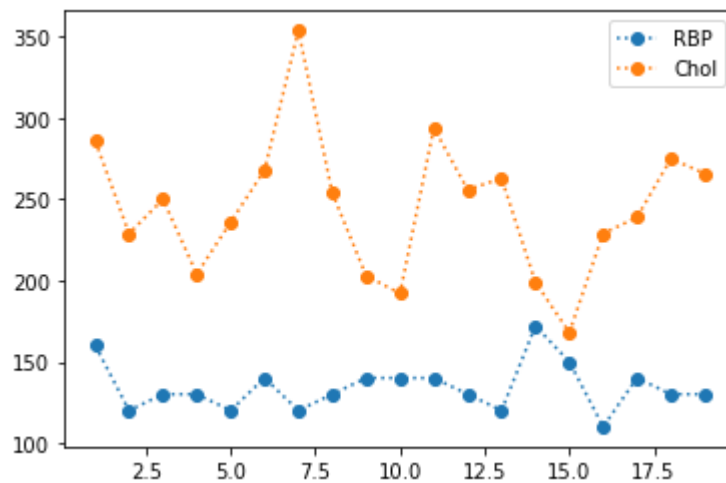
Out[8]: Text(0, 0.5, 'thal record by sex')



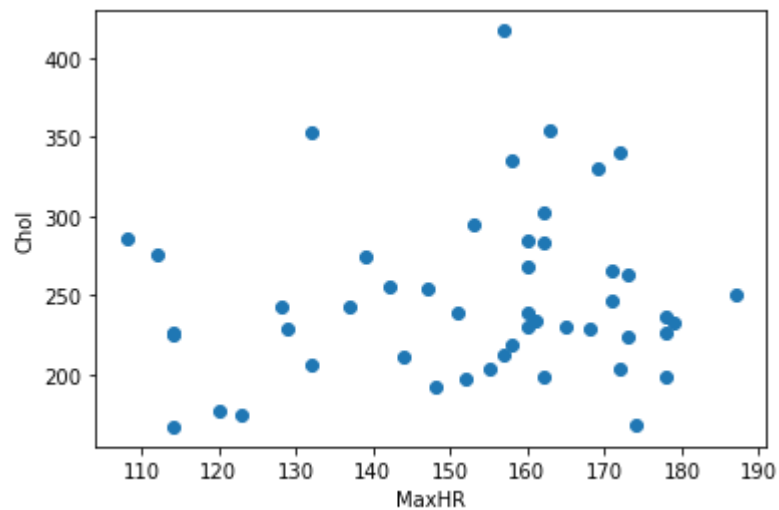
```
In [9]: h=data.iloc[:,3]
plt.hist(h,bins='auto')
plt.title("Frquency of the chest pain")
plt.xlabel('Chest pain categories')
plt.ylabel('Range')
plt.show()
```



```
In [10]: data['RestBP'].fillna(data['RestBP'],inplace=True)
h=data.iloc[1:20,4]
v=data.iloc[1:20,5]
plt.plot(h,label='RBP',linestyle="dotted",marker='o')
plt.plot(v,label="Chol",linestyle="dotted",marker='o')
plt.legend()
plt.show()
```



```
In [11]: h=data.iloc[1:50,8]
v=data.iloc[1:50,5]
plt.scatter(h,v)
plt.xlabel('MaxHR')
plt.ylabel('Chol')
plt.show()
```



In []:

In []:

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