In [1]:
```
import numpy as np
import pandas as pd
```

In [2]:
```
x=pd.read_csv(r"C:\Users\user\Downloads\4_drug200 - 4_drug200.csv")
x
```

Out[2]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC
3	28	F	NORMAL	HIGH	7.798	drugX
4	61	F	LOW	HIGH	18.043	drugY
...	...	...	...	...	...	...
195	56	F	LOW	HIGH	11.567	drugC
196	16	M	LOW	HIGH	12.006	drugC
197	52	M	NORMAL	HIGH	9.894	drugX
198	23	M	NORMAL	NORMAL	14.020	drugX
199	40	F	LOW	NORMAL	11.349	drugX

200 rows × 6 columns

In [3]:
```
x.dtypes
```

Out[3]:
```
Age              int64
Sex             object
BP              object
Cholesterol     object
Na_to_K        float64
Drug            object
dtype: object
```

In [4]:
```
x.head()
```

Out[4]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC
3	28	F	NORMAL	HIGH	7.798	drugX
4	61	F	LOW	HIGH	18.043	drugY

In [5]:
```
x.tail()
```

Out[5]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
195	56	F	LOW	HIGH	11.567	drugC
196	16	M	LOW	HIGH	12.006	drugC
197	52	M	NORMAL	HIGH	9.894	drugX
198	23	M	NORMAL	NORMAL	14.020	drugX
199	40	F	LOW	NORMAL	11.349	drugX

In [6]:
```
x.columns
```

Out[6]:
```
Index(['Age', 'Sex', 'BP', 'Cholesterol', 'Na_to_K', 'Drug'], dtype='object')
```

In [7]:
```
x.index
```

Out[7]:
```
RangeIndex(start=0, stop=200, step=1)
```

In [8]:
```
x.describe()
```

Out[8]:

	Age	Na_to_K
count	200.000000	200.000000
mean	44.315000	16.084485
std	16.544315	7.223956
min	15.000000	6.269000
25%	31.000000	10.445500
50%	45.000000	13.936500
75%	58.000000	19.380000
max	74.000000	38.247000

In [10]:
```
x["Age"]
```

Out[10]:
```
0      23
1      47
2      47
3      28
4      61
      ..
195    56
196    16
197    52
198    23
199    40
Name: Age, Length: 200, dtype: int64
```

In [11]:
```
x[0:2]
```

Out[11]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC

In [12]:
```
x.loc[0:2]
```

Out[12]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC

In [13]:
```
x.iloc[0:2]
```

Out[13]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC

In [14]:
```
x.loc["Age":"BP"]
```

Out[14]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug

In [15]:
```
x[x["Age"]<=2]
```

Out[15]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug

In [16]:
```
x.fillna(value=5)
```

Out[16]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC
3	28	F	NORMAL	HIGH	7.798	drugX
4	61	F	LOW	HIGH	18.043	drugY
...	...	...	...	...	...	...
195	56	F	LOW	HIGH	11.567	drugC
196	16	M	LOW	HIGH	12.006	drugC
197	52	M	NORMAL	HIGH	9.894	drugX
198	23	M	NORMAL	NORMAL	14.020	drugX
199	40	F	LOW	NORMAL	11.349	drugX

200 rows × 6 columns

In [17]:
```
x.dropna()
```

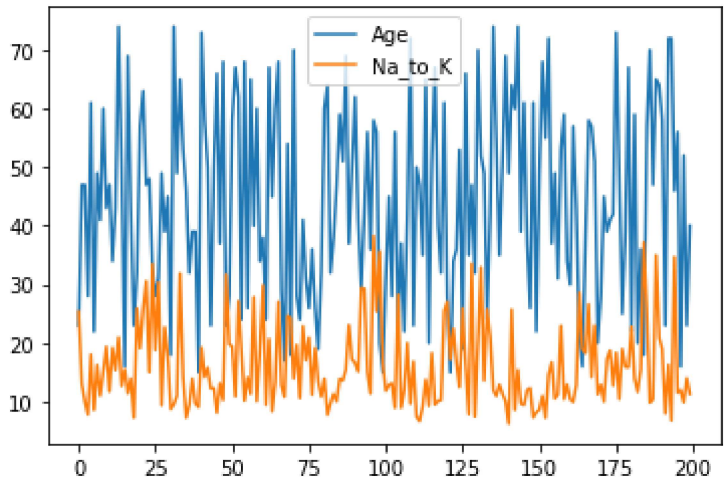
Out[17]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC
3	28	F	NORMAL	HIGH	7.798	drugX
4	61	F	LOW	HIGH	18.043	drugY
...	...	...	...	...	...	...
195	56	F	LOW	HIGH	11.567	drugC
196	16	M	LOW	HIGH	12.006	drugC
197	52	M	NORMAL	HIGH	9.894	drugX
198	23	M	NORMAL	NORMAL	14.020	drugX
199	40	F	LOW	NORMAL	11.349	drugX

200 rows × 6 columns

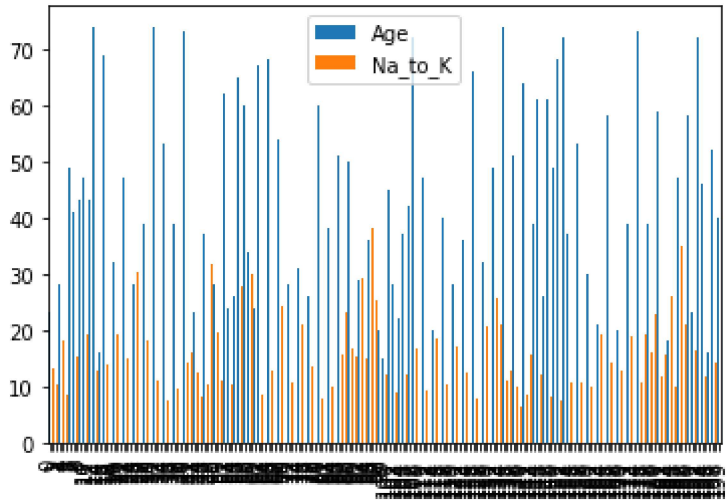
In [18]:
```
x.plot.line()
```

Out[18]: <AxesSubplot:>



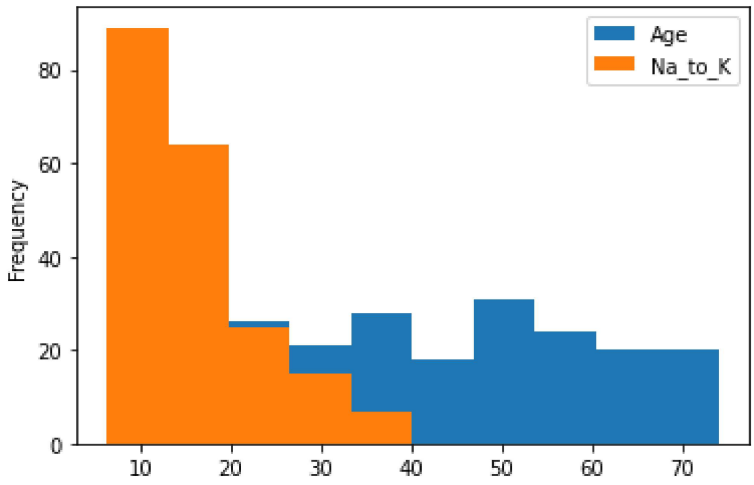
In [19]:
```
x.plot.bar()
```

Out[19]: <AxesSubplot:>

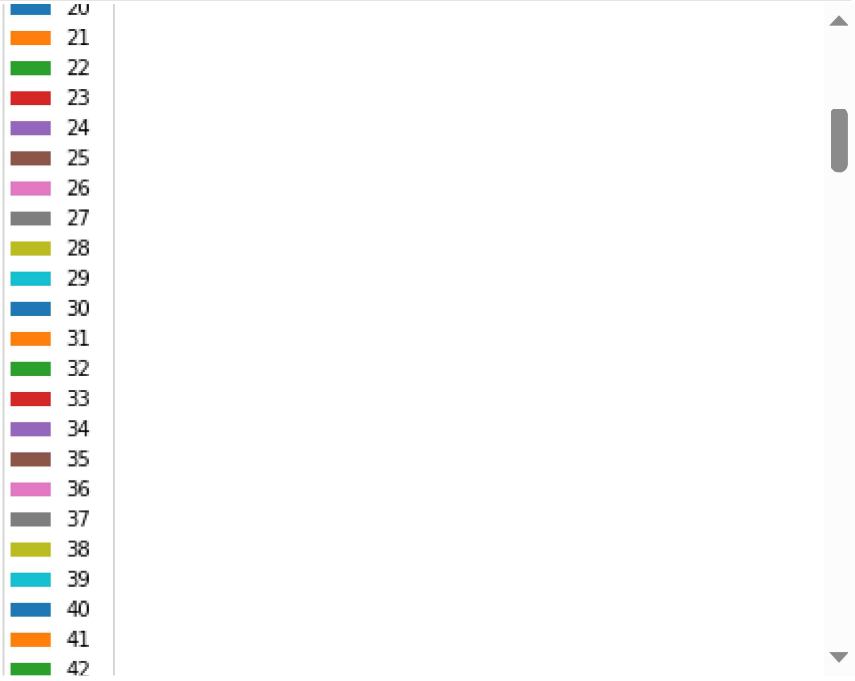


In [20]:
```
x.plot.hist()
```

Out[20]: <AxesSubplot:ylabel='Frequency'>

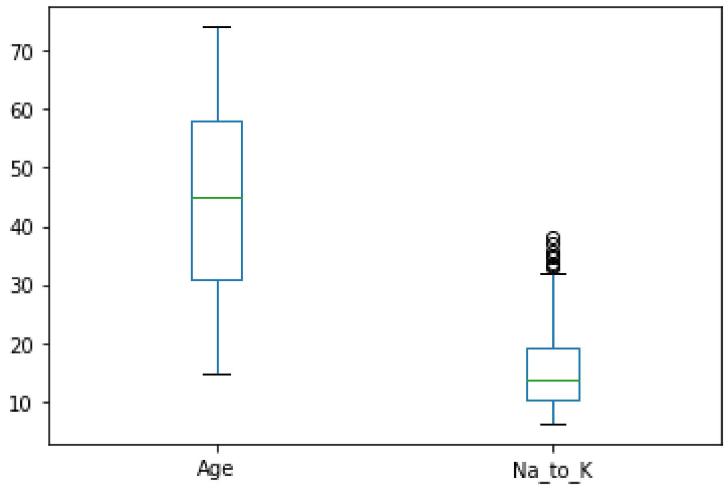


In [21]:
```
x.plot.pie(y='Age')
```



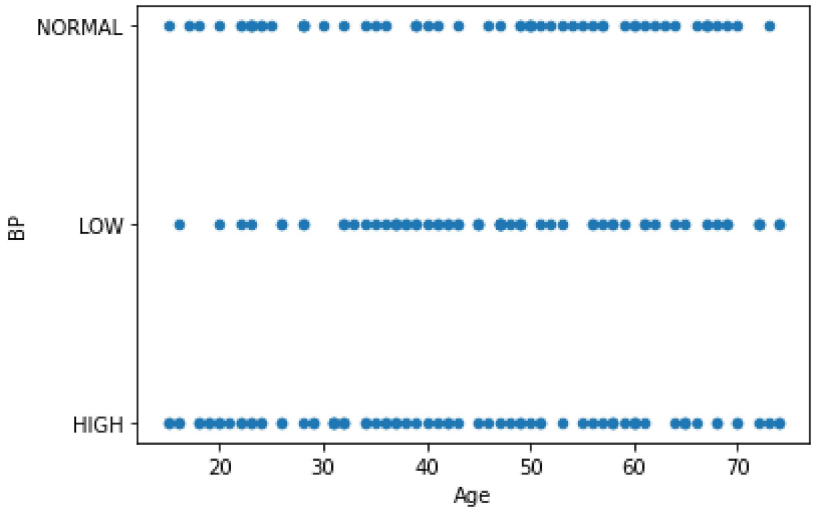
In [22]:
```
x.plot.box()
```

Out[22]: <AxesSubplot:>



In [23]:
```
x.plot.scatter(x='Age',y='BP')
```

Out[23]: <AxesSubplot:xlabel='Age', ylabel='BP'>



In [ ]:
```

```