```
#importing the libraries

import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')

#Loading the dataset

df=pd.read_csv('Inventory Management dataset.csv')
df.head()

         data  venda  estoque  preco
0  2014-01-01      0     4972   1.29
1  2014-01-02     70     4902   1.29
2  2014-01-03     59     4843   1.29
3  2014-01-04     93     4750   1.29
4  2014-01-05     96     4654   1.29

df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 937 entries, 0 to 936
Data columns (total 4 columns):
 #   Column   Non-Null Count  Dtype
---  ------   --------------  -----
 0   data     937 non-null    object
 1   venda    937 non-null    int64
 2   estoque  937 non-null    int64
 3   preco    937 non-null    float64
dtypes: float64(1), int64(2), object(1)
memory usage: 29.4+ KB

df.columns

Index(['data', 'venda', 'estoque', 'preco'], dtype='object')

df.head()

         data  venda  estoque  preco
0  2014-01-01      0     4972   1.29
1  2014-01-02     70     4902   1.29
2  2014-01-03     59     4843   1.29
3  2014-01-04     93     4750   1.29
4  2014-01-05     96     4654   1.29

df.tail()

           data  venda  estoque  preco
932  2016-07-27     98     3179   2.39
```

```
933  2016-07-28    108     3071   2.39
934  2016-07-29    128     4095   2.39
935  2016-07-30    270     3825   2.39
936  2016-07-31    183     3642   2.39
```

```
df.describe()
```

```
            venda      estoque       preco
count  937.000000   937.000000  937.000000
mean    90.533618  1608.258271    1.592572
std     80.682089  1356.691877    0.529502
min      0.000000     0.000000    0.000000
25%     33.000000   794.000000    1.290000
50%     76.000000  1348.000000    1.390000
75%    127.000000  1964.000000    1.890000
max    542.000000  7228.000000    2.980000
```

```
df.isnull().sum()
```

```
data       0
venda      0
estoque    0
preco      0
dtype: int64
```

```
df.corr()
```

```
            venda   estoque     preco
venda    1.000000  0.153659  0.094779
estoque  0.153659  1.000000 -0.032604
preco    0.094779 -0.032604  1.000000
```

```
df.cov()
```

```
                venda       estoque      preco
venda     6509.599563  1.681963e+04   4.049096
estoque  16819.631265  1.840613e+06 -23.421562
preco        4.049096 -2.342156e+01   0.280372
```

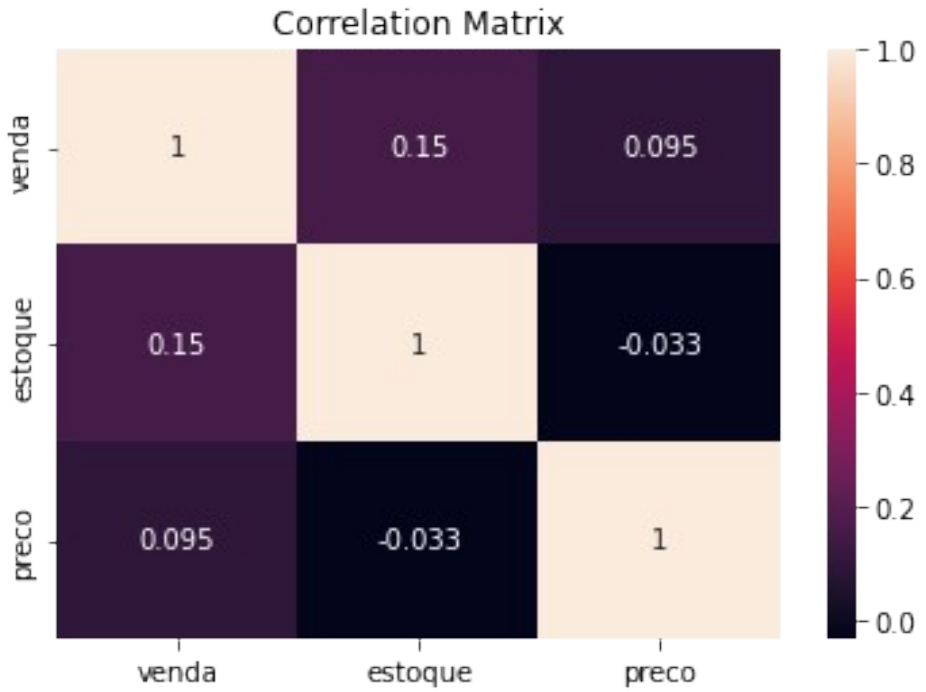
```
df.dtypes
```

```
data        object
venda        int64
estoque      int64
preco      float64
dtype: object
```

```
df.shape
```

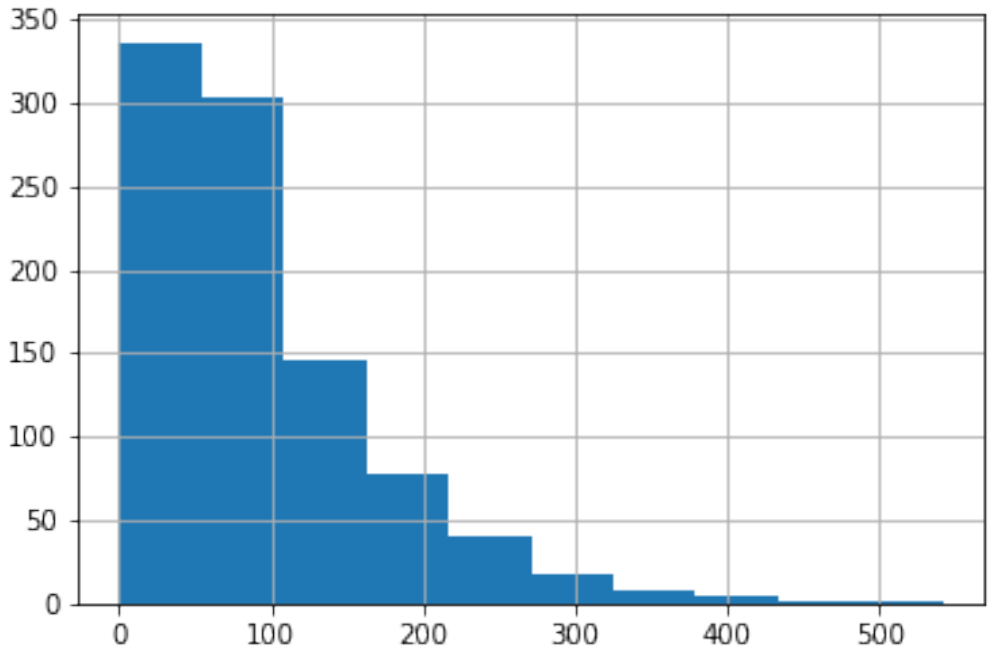
```
(937, 4)
```

```
sns.heatmap(df.corr(), annot = True)
plt.title("Correlation Matrix")
plt.show()
```



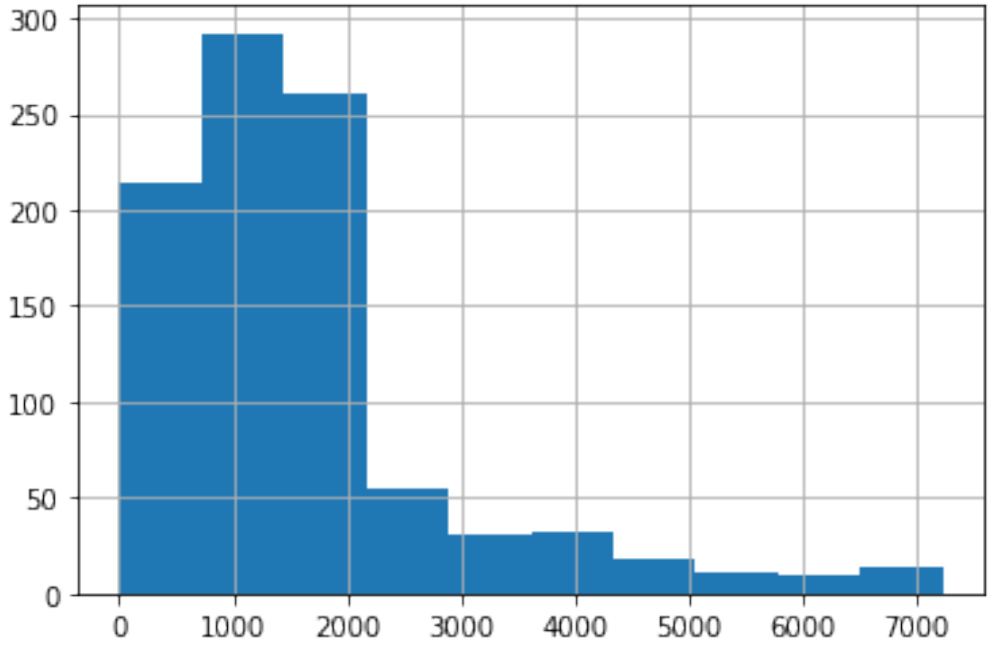

```
%matplotlib inline

df['venda'].hist(bins=10)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f48bb0d6890>
```



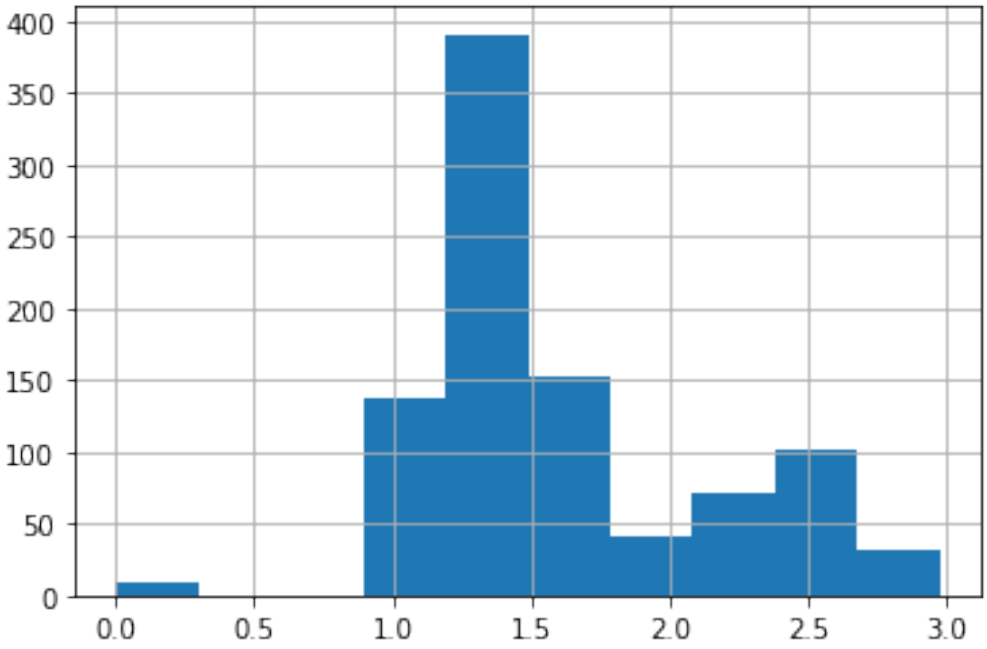

```
df['estoque'].hist(bins=10)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f48bb0ce890>
```



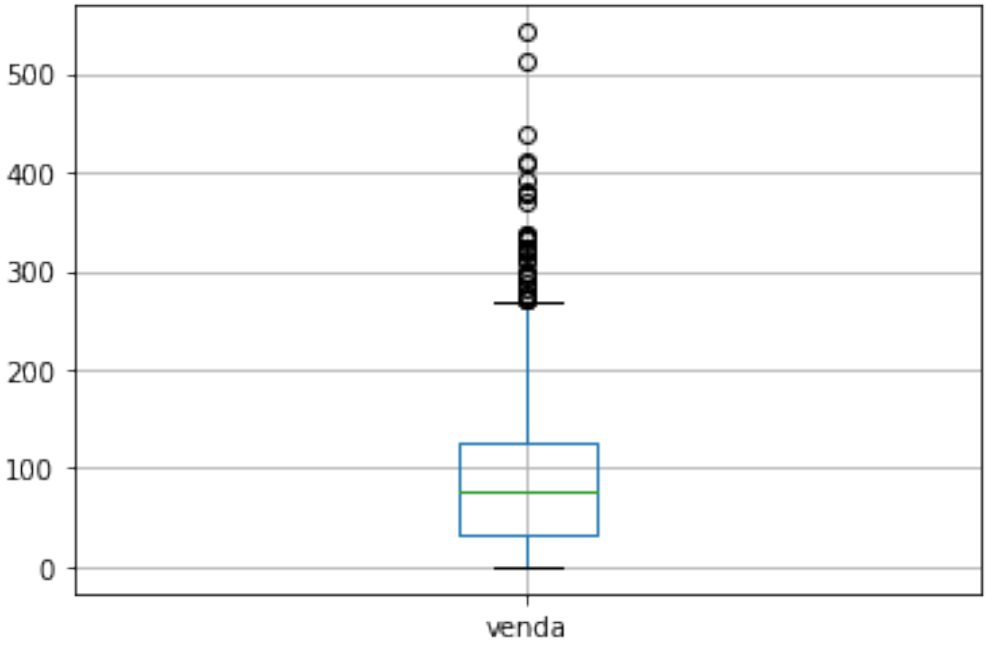

```
df['preco'].hist(bins=10)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f48bafd1d10>
```



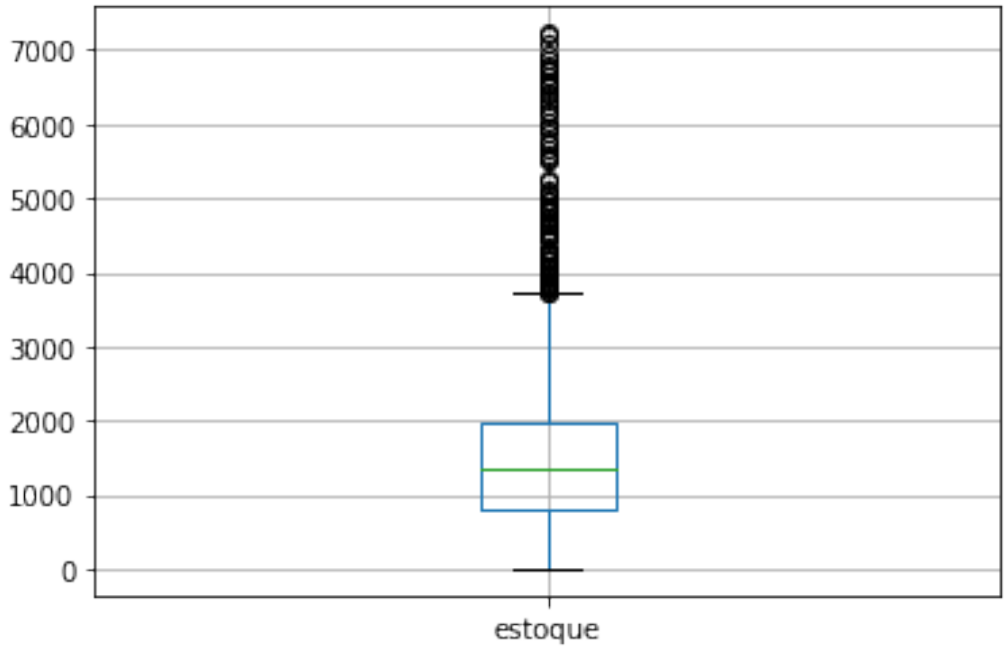

```
df.boxplot(column='venda')
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f48bafb4e50>
```



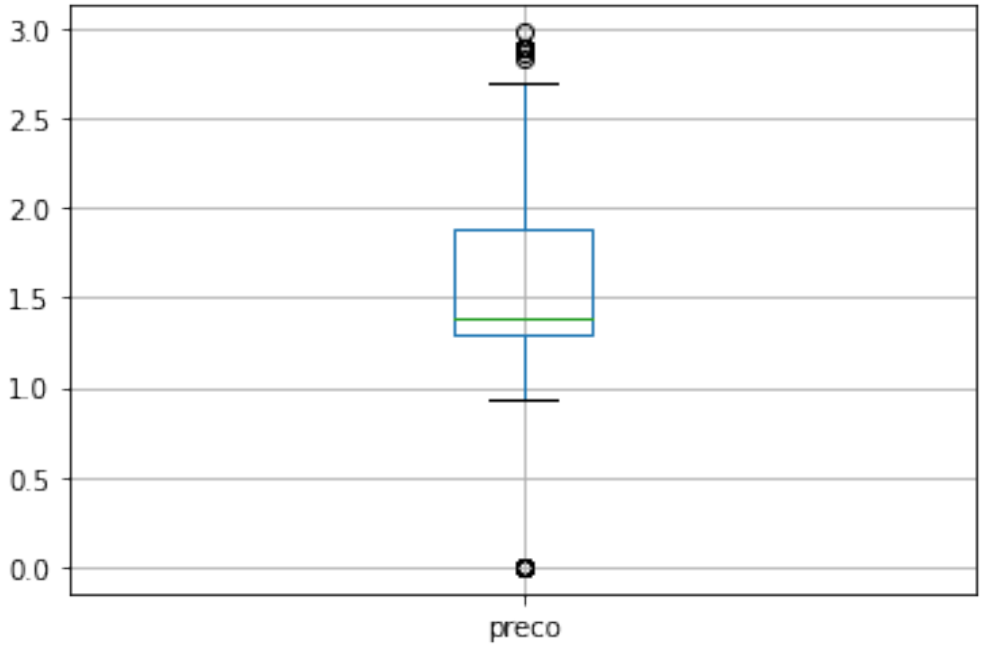

```
df.boxplot(column='estoque')
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f48baefcdd0>
```



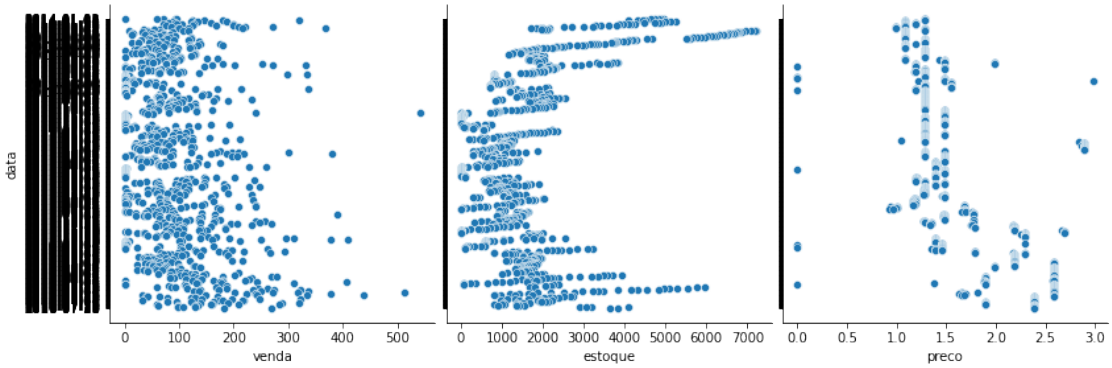

```
df.boxplot(column='preco')
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f48bae26150>
```




```
sns.pairplot(df, x_vars=['venda','estoque','preco'], y_vars='data' ,
height = 4)
```

```
<seaborn.axisgrid.PairGrid at 0x7f48bae06e10>
```


data
0
100
200
300
400
500
venda
0
1000
2000
3000
4000
5000
6000
7000
estoque
0.0
0.5
1.0
1.5
2.0
2.5
3.0
preco