```
import seaborn as sns

df = sns.load_dataset('iris')
df.head()
```

	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

```
df.describe()
```

	sepal_length	sepal_width	petal_length	petal_width
count	150.000000	150.000000	150.000000	150.000000
mean	5.843333	3.057333	3.758000	1.199333
std	0.828066	0.435866	1.765298	0.762238
min	4.300000	2.000000	1.000000	0.100000
25%	5.100000	2.800000	1.600000	0.300000
50%	5.800000	3.000000	4.350000	1.300000
75%	6.400000	3.300000	5.100000	1.800000
max	7.900000	4.400000	6.900000	2.500000

```
df.shape
```

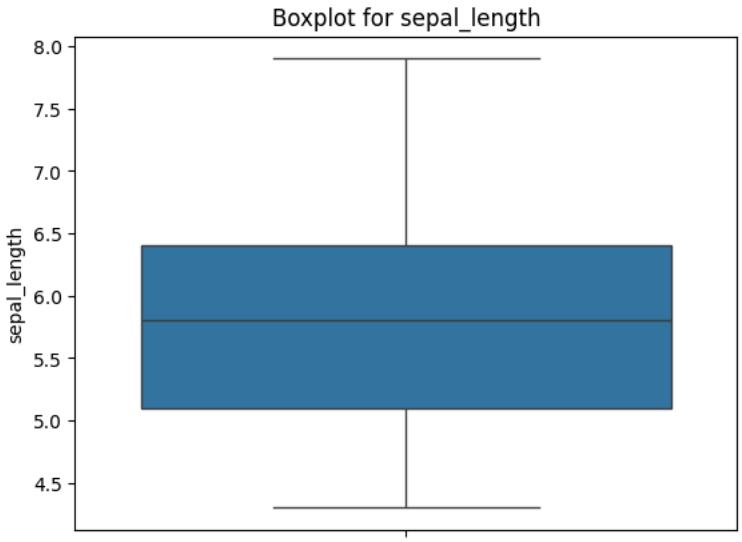
```
(150, 5)
```

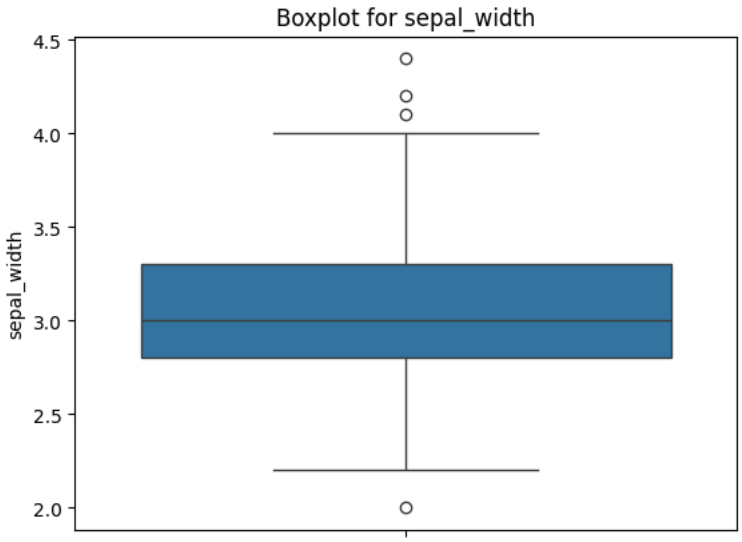
```
X = df.drop('species', axis=1)
Y = df['species']
```

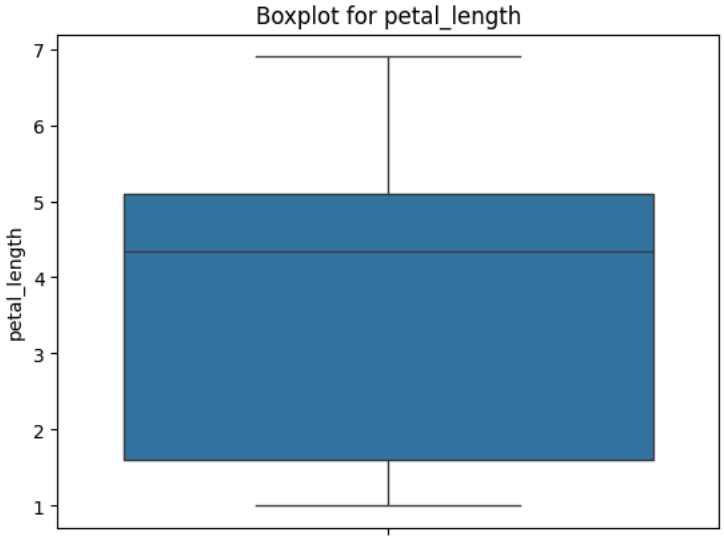
```
df.isnull().sum()
```

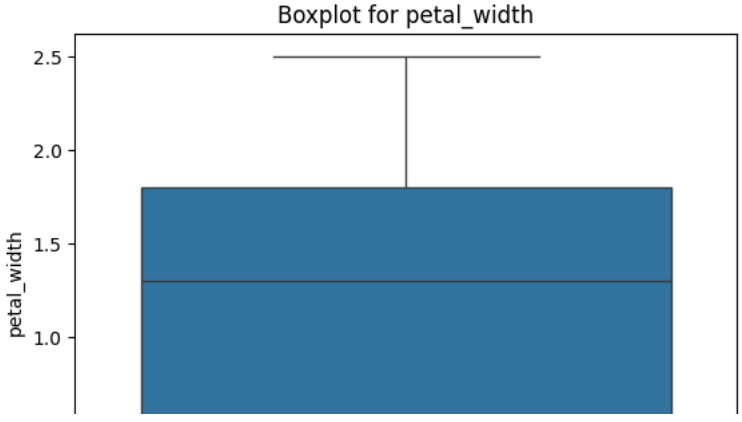
```
df.fillna(df.mean(numeric_only=True), inplace=True)
```

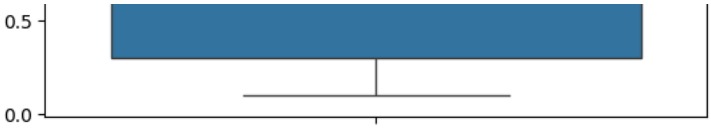
```
import matplotlib.pyplot as plt
import seaborn as sns

for col in X.columns:
    sns.boxplot(y=df[col])
    plt.title(f'Boxplot for {col}')
    plt.show()
```


Boxplot for sepal_length
sepal_length
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5


Boxplot for sepal_width
sepal_width
4.5
4.0
3.5
3.0
2.5
2.0


Boxplot for petal_length
petal_length
7
6
5
4
3
2
1


Boxplot for petal_width
petal_width
2.5
2.0
1.5
1.0




```
numeric_df = df.select_dtypes(include=['float64', 'int64'])

Q1 = numeric_df.quantile(0.25)
Q3 = numeric_df.quantile(0.75)
IQR = Q3 - Q1

outliers = ((numeric_df < (Q1 - 1.5 * IQR)) | (numeric_df > (Q3 + 1.5 * IQR))).sum()
print("Outliers per numeric column:\n", outliers)
```

```
Outliers per numeric column:
 sepal_length    0
sepal_width     4
petal length    0
```