In [ ]:

```
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
```

In [ ]:

```
df =[1,2,3,4,5,6,7,8,9,3,4,2,3,4,6,8,1,1,2,100]
```

In [ ]:

```

```

In [ ]:

```
outliers=[]

def detect_outliers(data):
    threshold = 3
    mean = np.mean(data)
    std = np.std(data)

    for i in data:
        z_score = (i - mean) / std
        if np.abs(z_score) > threshold:
            outliers.append(i)
    return outliers
```

In [ ]:

```
detect_outliers(df)
```

Out[ ]:

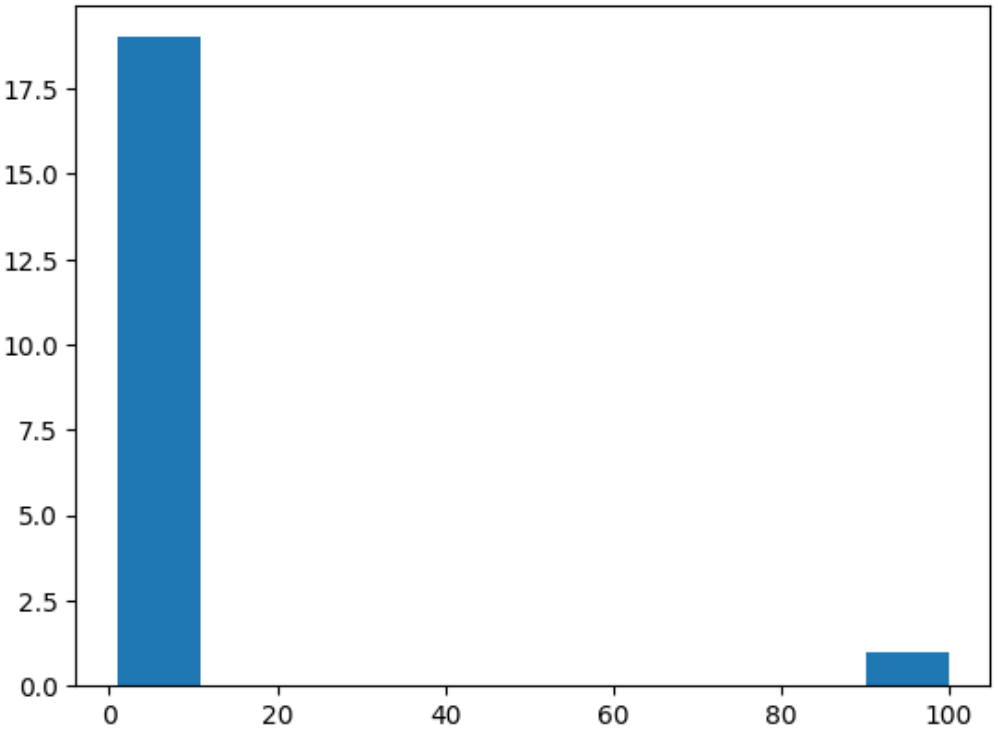
```
[100]
```

In [ ]:

```
plt.hist(df)
```

Out[ ]:

```
(array([19.,  0.,  0.,  0.,  0.,  0.,  0.,  0.,  0.,  1.]),
 array([  1. ,  10.9,  20.8,  30.7,  40.6,  50.5,  60.4,  70.3,  80.2,
         90.1, 100. ]),
 <BarContainer object of 10 artists>)
```



In [ ]:

```
#I
data = sorted(df)
```

In [ ]:

```
q1,q3 = np.percentile(data,[25,75])
```

In [ ]:

```
print(q1,q3)
```

```
2.0 6.25
```

In [ ]:

```
iqr= q3-q1
```

In [ ]:

```
lf= q1-1.5*iqr
```

In [ ]:

```
hf= q1+1.5*iqr
```

In [ ]:

```
print(lf,hf)
```

```
-4.375 8.375
```

In [ ]:

```
import seaborn as sns
```

In [ ]:

```
sns.boxplot(data)
```

```
/usr/local/lib/python3.10/dist-packages/seaborn/categorical.py:640: FutureWarning: SeriesGroupBy.grouper is deprecated and will be removed in a future version of pandas.
  positions = grouped.grouper.result_index.to_numpy(dtype=float)
```

Out[ ]:

```
<Axes: >
```