In [24]:

```
import pandas as pd
import numpy as np
```

In [25]:

```
measures = pd.read_excel('data.xlsx')
measures
```

Out[25]:

	Name of company	Measure X
0	Allied Signal	0.2423
1	Bankers Trust	0.2553
2	General Mills	0.2541
3	ITT Industries	0.2414
4	J.P.Morgan & Co.	0.2962
5	Lehman Brothers	0.2825
6	Marriott	0.2581
7	MCI	0.2439
8	Merrill Lynch	0.4026
9	Microsoft	0.3295
10	Morgan Stanley	0.9136
11	Sun Microsystems	0.2599
12	Travelers	0.3942
13	US Airways	0.2671
14	Warner-Lambert	0.3500

```
In [26]:
```

```
x = measures['Measure X']
x
```

Out[26]:

- 0 0.2423
- 1 0.2553
- 2 0.2541
- 3 0.2414
- 4 0.2962
- T 0.2302
- 5 0.2825
- 6 0.2581
- 7 0.2439
- 8 0.4026
- 9 0.3295
- 10 0.9136
- 11 0.2599
- 12 0.3942
- 13 0.2671
- 14 0.3500

Name: Measure X, dtype: float64

In [38]:

```
np.transpose(measures,axes=None)
```

Out[38]:

	0	1	2	3	4	5	6	7	8	
Name of company	Allied Signal	Bankers Trust	General Mills	ITT Industries	J.P.Morgan & Co.	Lehman Brothers	Marriott	MCI	Merrill Lynch	Mic
Measure X	0.2423	0.2553	0.2541	0.2414	0.2962	0.2825	0.2581	0.2439	0.4026	0
4										•

In [41]:

```
\mathsf{t} = [0.2423, 0.2553, 0.2541, 0.2414, 0.2962, 0.2825, 0.2581, 0.2439, 0.4026, 0.3295, 0.9136, 0.2599, 0.83295, 0.9136, 0.2599, 0.83295, 0.9136, 0.2599, 0.83295, 0.9136, 0.2599, 0.83295, 0.9136, 0.2599, 0.83295, 0.9136, 0.2599, 0.83295, 0.9136, 0.2599, 0.83295, 0.9136, 0.83295, 0.9136, 0.83295, 0.9136, 0.83295, 0.9136, 0.83295, 0.9136, 0.83295, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136, 0.9136,
```

In [43]:

```
t.sort()
print(t)
```

[0.2414, 0.2423, 0.2439, 0.2541, 0.2553, 0.2581, 0.2599, 0.2671, 0.2825, 0.2 962, 0.3295, 0.35, 0.3942, 0.4026, 0.9136]

In [4]:

```
x.mean()*100
```

Out[4]:

33.27133333333333

```
In [44]:
```

```
x.std()*100
```

Out[44]:

16.945400921222028

In [45]:

from matplotlib import pyplot as plt

In [50]:

```
plt.boxplot(x)
plt.show()
```

