CSE 2400
Applied Statistics
Dr. Bond
Spring 2017
Anton Medvedev

Homework Assignment 4

8.1

```
In [45]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/
antonmdv/Desktop/Spring2017/Prob and Stats/Ass4')

8.1

5-Point-Summary for 'before' data

Mean:
50.0

STDev:
7.270291799999699

Minimum:
37

Q1:
43

Median:
50.0

Q3
56

Max
60
```

```
In [46]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/
antonmdv/Desktop/Spring2017/Prob and Stats/Ass4')
```

8.1

5-Point-Summary for 'after' data

Mean:
40.2

STDev:
7.691553809211764
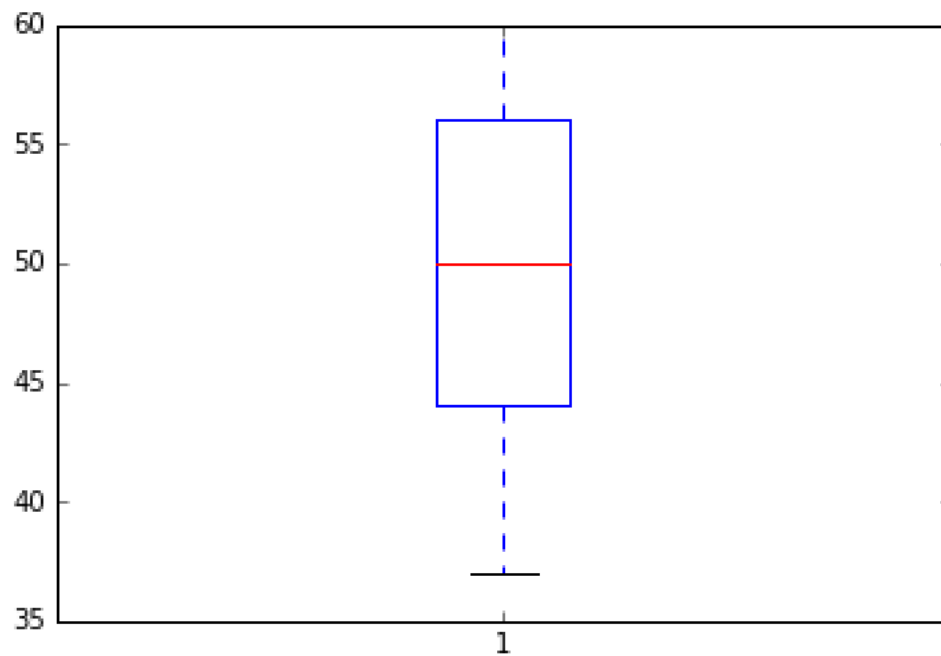
Minimum:
21

Q1:
35.5

Median:
39.0

Q3
45.5

Max
53

In [**47**]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/
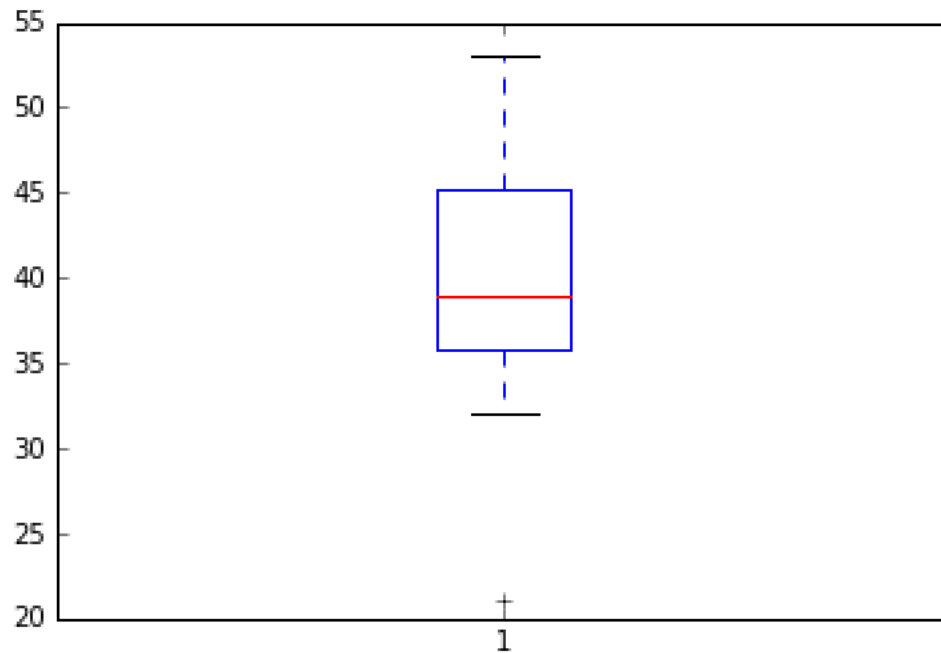antonmdv/Desktop/Spring2017/Prob and Stats/Ass4')

8.1

Box Plot for 'before' data

```
In [48]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/
antonmdv/Desktop/Spring2017/Prob and Stats/Ass4')
```

8.1

Box Plot for 'after' data

Both plots indicate symmetric distribution and follows a normal distribution.

8.2

```
In [52]: runfile('/Users/antonmdv/Desktop/Spring2017/Prob and
Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/Desktop/
Spring2017/Prob and Stats/Ass4')
```

8.2

Mean:
17.954000000000004
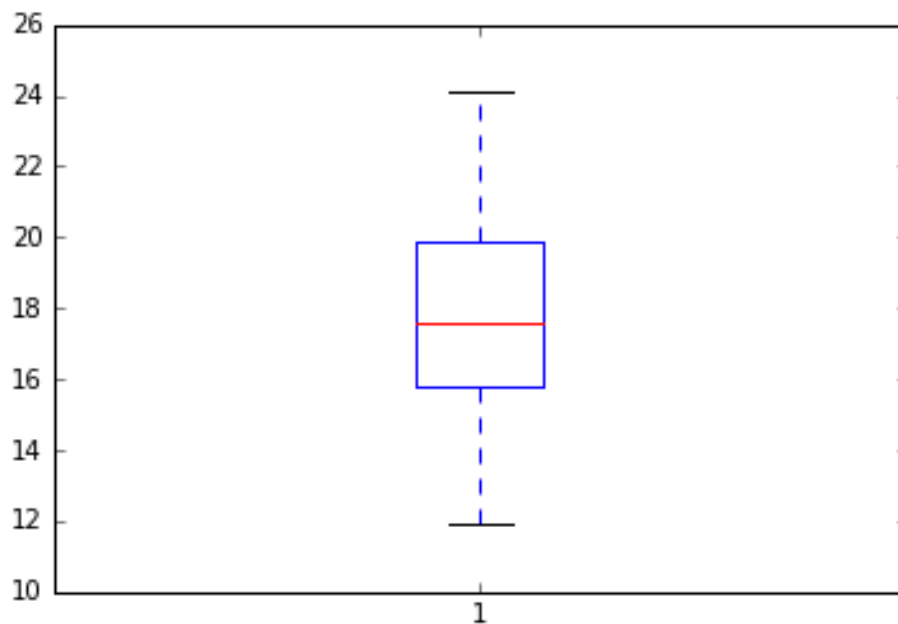
STDev:
2.961230149785727

Minimum:
11.9

Q1:
15.8

Median:
17.55

Q3
19.9

Max
24.1

```
In [53]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/
Desktop/Spring2017/Prob and Stats/Ass4')

In [54]:
8.2

IQR ->
4.099999999999998
|
```
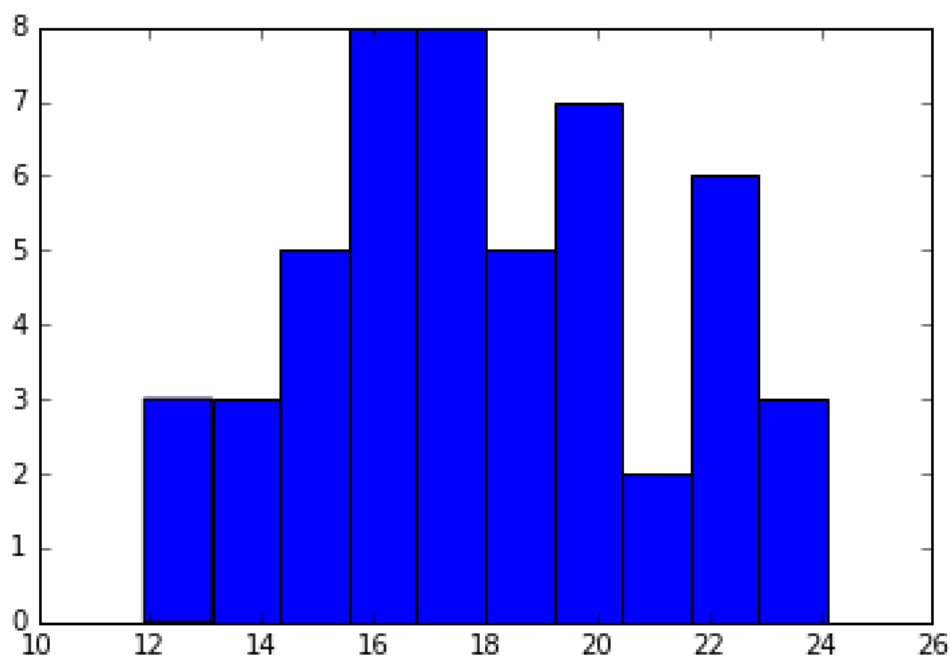
```
In [55]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/
Desktop/Spring2017/Prob and Stats/Ass4')
```
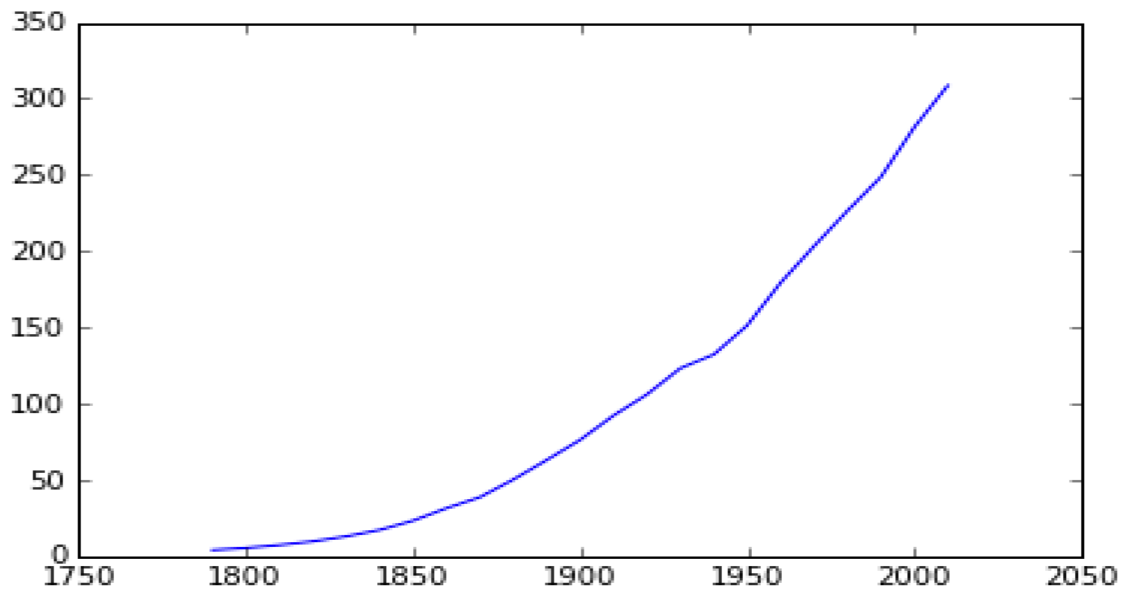
8.2

From the above histogram, the number of concurrent users does not follow normal distribution.

8.5

In [56]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/
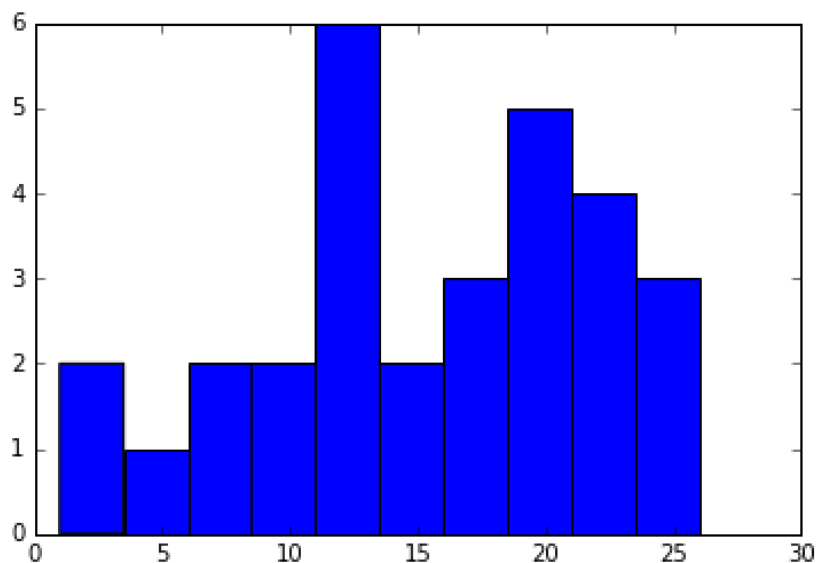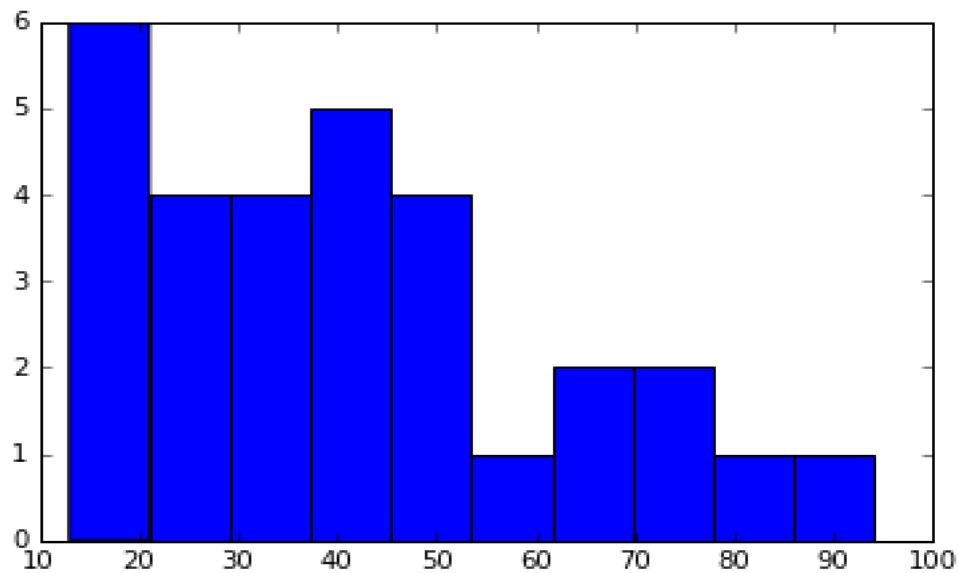Desktop/Spring2017/Prob and Stats/Ass4')

8.5

8.8

In [57]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/
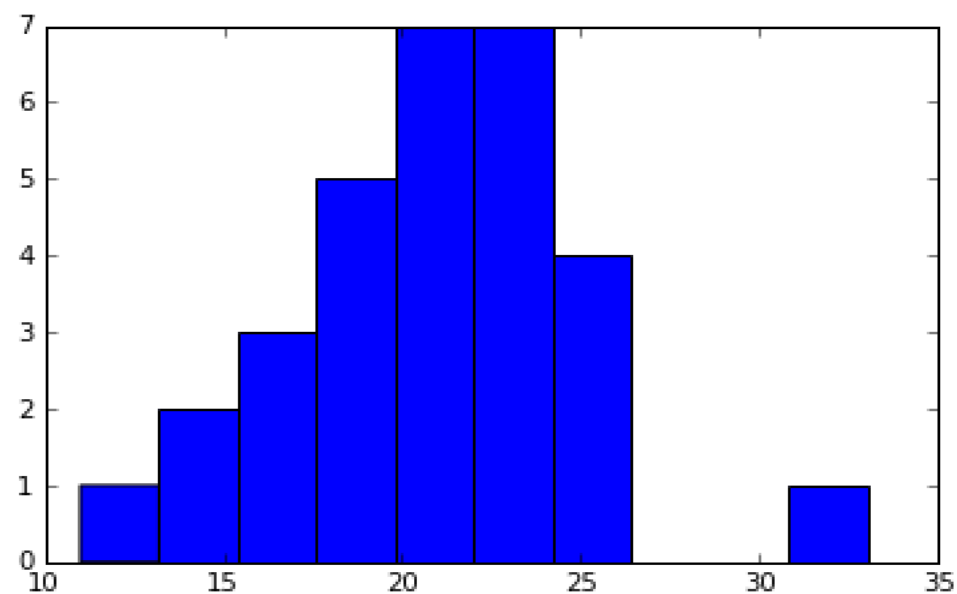Desktop/Spring2017/Prob and Stats/Ass4')

8.8

In [59]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/
Desktop/Spring2017/Prob and Stats/Ass4')

8.8

In [58]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/
Desktop/Spring2017/Prob and Stats/Ass4')

8.8

```
In [60]: runfile('/Users/antonmdv/Desktop/Spring2017/
Prob and Stats/Ass4/Chapter8.py', wdir='/Users/antonmdv/
Desktop/Spring2017/Prob and Stats/Ass4')

8.8

Mean List One:
14.966666666666667
Mean List Two:
20.833333333333332
Mean List Three:
41.3

Median List One:
15.5
Median List Two:
21.0
Median List Three:
39.5
```