Lab Exercise - Basic Data Structure

In this lab exercise, we are trying to extract some meaningful statistics from a temperature data set (Heathrow Airport: highest temperature reported in each month, 1948-2016).

In [4]:
```
temperatures = []
with open('data/lab_05.txt') as infile:
    for row in infile:
        temperatures.append(float(row.strip()))
```

In [7]:
```
temperatures[0:4]
```

Out[7]: [8.9, 7.9, 14.2, 15.4]

In [4]:
```
# Find the maximum temperature from the list
# I got tutoring from a friend that's a C.S. major, the code did n
# However, we worked on it together and it was thoroughly explaine
lst = [8.9, 7.9, 14.2, 15.4]

curr_max = 0;
for i in lst:
    if i> curr_max:
        curr_max = i
print (curr_max)
```

```
99999999
```

In [6]:
```
# Find the minimum temperature from the list
# I got tutoring from a friend that's a C.S. major, the code did n
# However, we worked on it together and it was thoroughly explaine

lst = [8.9, 7.9, 14.2, 15.4]

curr_min = 99999999
for i in lst:
    if i< curr_min:
        curr_min = i
print (curr_min)
```

```
7.9
```

In [8]:

```
# Find the average temperature from the list
# I got tutoring from a friend that's a C.S. major, the code did n
# However, we worked on it together and it was thoroughly explaine

temp = [8.9, 7.9, 14.2, 15.4]

total = 0
length = 0;
for i in temp:
    total = total + i
    length = length + 1;
print (total/length)
```

```
11.6
```

In [61]:
```
# Find the median temperature from the list
# Hint:sort the data and locate the element in middle of the sorte
# I got tutoring from a friend that's a C.S. major, the code did n
# However, we worked on it together and it was thoroughly explaine

import statistics
temp =  [8.9, 7.9, 14.2, 15.4]
sortedTemp = []



while temp:
    counter = temp[0]
    for j in temp:
            if j < counter:
                counter = j
    print(counter)
    sortedTemp.append(counter)
    temp.remove(counter)


a = len(sortedTemp)

med = statistics.median(sortedTemp)


print(med)
```

```
7.9
8.9
14.2
15.4
[7.9, 8.9, 14.2, 15.4]
11.55
```

In [3]:
```
# Find the number of unique temperature from the list
# I got tutoring from a friend that's a C.S. major, the code did n
# However, we worked on it together and it was thoroughly explaine

temp =  [8.9, 7.9, 14.2, 15.4]
number_of_unique_values = len(temp)
print(number_of_unique_values)
```

```
4
```

In [ ]:
```

```

In [ ]:
```
1
```