

## Interpreting .dif files from the diff utility in CSC223 and CSC523.

### CSC223 interpreting diff files (erroneous output) from make test:

```
diff --ignore-trailing-space --strip-trailing-cr CSC223f23CSVpre1.txt /home/kutz
... (stuff in between diff lines)
diff --ignore-trailing-space --strip-trailing-cr CSC223f23CSVassn1.txt
/home/kutztown.edu/parson/Scripting/csc223assn1reffiles/CSC223f23CSVassn1.txt
> ...
CSVassn1.txt.dif
make: *** [CSC223f23CSVassn1.csv] Error 1
```

Open CSC223f23CSVassn1.txt.dif in a text editor

```
19,21c19,21
<  min = -177
<  max = 256
<  mean = 49.72
---
>  min = -41
>  max = 132
>  mean = 49.53
23,24c23,24
<  mode = 0
<  pstdev = 49.91
---
>  mode = 52
>  pstdev = 20.05
```

Trace this back to CSC223f23CSVassn1.txt. Notepad++ is showing symbolic links as directories, so inspect the file in the (putty) command window as follows:

```
$ cat -n CSC223f23CSVassn1.txt
...
17 RndNormal20, seed = 220223523 statistics:
18  count = 100000
19  min = -177
20  max = 256
21  mean = 49.72
22  median = 50.0
23  mode = 0
24  pstdev = 49.91
```

I intentionally broke RndNormal20. The correct values are the ones with the > prompt. The ones with the < prompts are the incorrect ones.

```
*****  
***
```

**CSC523 interpreting diff files (erroneous output) from make test:**

```
diff --strip-trailing-cr Ethout.csv Ethout.csv.ref > Ethout.dif  
diff --strip-trailing-cr TCPUDPout.csv TCPUDPout.csv.ref > TCPUDPout.dif  
make: *** [test] Error 1
```

Open TCPUDPout.dif in a text editor. The lines starting with < are your program's output. Lines starting with > are expected output.

```
2,10c2,10  
< 7,1,0.000000,a104-126-112-  
105.deploy.static.akamaitechnologies.com,104.126.112.105,172.16.42.4,172.16.42.4,TCP  
,https,443,49243,49243,0,0,  
...  
---  
> 7,1,0.000000,a104-126-112-  
105.deploy.static.akamaitechnologies.com,104.126.112.105,172.16.42.4,172.16.42.4,TCP  
,https,443,49243,49243,1,0,
```

I intentionally broke this spot in the code by using the same group number N for two fields.

```
tcpNumSeq = int(matchobj.group(N))  
tcpNumLen = int(matchobj.group(N))
```

Note that you need to wrap the call to group() in a call to int() to convert these strings to ints for later math. Python addition and the min() and max() functions require numeric arguments, hence the int() conversion of strings.