

Reading from Files II

Review

```
file = open("filename.txt", "r")
for line in file:
    line = line.rstrip()
    # do something with line
```

Reading one
string per line

```
-----
file = open("filename.txt", "r")
for line in file:
    line = line.rstrip()
    num = int(line)
    # do something with num
```

Reading one int
per line

- Create a text file containing five positive integers, one per line.
- Write a program to calculate the average of these numbers (hint: use the code from the previous class that calculated the total).
- Challenge: Edit your program to also print out the largest and smallest numbers in the file.

- Problem that re-occurs often in CS:
- Finding the largest item in a set of thing where you can only look at each thing once.



- Pseudocode:
- **largest** = [smallest possible number that you could ever see]
- look at each new number as you see it:
if the new number > **largest**, then
largest = new number
- after this loop, **largest** will have the largest number in it!

Split function

Splits a string into multiple string variables based on a separator:

```
var1, var2, ... = var.split("sep")
```

The diagram illustrates the syntax of the split function. At the top, the code `var1, var2, ... = var.split("sep")` is shown. Below it are three blue boxes with white text. The first box, labeled 'new string variables separated by commas', has two blue arrows pointing to `var1` and `var2`. The second box, labeled 'existing string variable to split', has a blue arrow pointing to `var`. The third box, labeled 'the separator that appears between string pieces', has a blue arrow pointing to `"sep"`.

new string variables separated by commas

existing string variable to split

the separator that appears between string pieces

Reading multiple strings per line

```
file = open("filename.txt", "r")
for line in file:
    line = line.rstrip()
    var1, var2, ... = var.split("sep")
    # do something with var1, var2, etc.
```