

## COMP 141

File Reading, split function



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## Announcements

- Program 6 has been assigned
  - Due on Nov. 2<sup>nd</sup> by 11:55pm

## Practice From Last Time

Open your **randomNums.txt** file that you created last time and read in each number.

1. Output the sum and average of the numbers in your file.
2. Calculate the consecutive differences between numbers in the file.
3. **Challenge:** edit your program to print out the smallest and largest values in the file.

– If you need a randomNums.txt file, I put mine in my Box.com directory.

– Remember that the randomNums.txt file and your Python file need to reside in the same folder!



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



- Pseudocode for finding the largest number in a collection of numbers:
- **largest** = [smallest possible number that you could ever see]
- look at each number once:  
if the current number > **largest**, then  
**largest** = current 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")
```

new string variables separated by commas

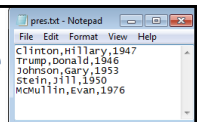
existing string variable to split

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.
```

## Class Practice



- Use the pres.txt file in my box.com directory
- Write a program to print the year the oldest presidential candidate was born, and the year the youngest candidate was born.
- Edit your program to print the names of the oldest and youngest candidates.
- Make a new program to print the names of the candidates who come first alphabetically and last alphabetically.

## In-Class Lab