More on Strings

Is Twitter Successful?
HW 3 Due this Thursday!
HW 3 Bonus question: comment
Please come to office hours!
Social Impact of Twitter

Four more years.

9:16 PM - 6 Nov 2012

770,825 Retweets
338,422 Likes
Remember, I am the only one who is self-funding my campaign. All of the other candidates are bought and paid for by special interests!

9:21 AM - 8 Mar 2016
Boycott all Apple products until such time as Apple gives cellphone info to authorities regarding radical Islamic terrorist couple from Cal
I use both iPhone & Samsung. If Apple doesn't give info to authorities on the terrorists I'll only be using Samsung until they give info.

2:32 PM - 19 Feb 2016

3,699 replies 9,786 likes
Pay attention to the timeline...
Twitter Revolutions

- 2011 Egyptian revolution
- 2010–2011 Tunisian protests
- 2009–2010 Iranian election protests
- 2009 Moldova civil unrest

Read: http://www.wired.com/2011/02/egypts-revolutionary-fire/

Anti-government protesters celebrate in Tahrir Square in downtown Cairo Friday. Fireworks burst, and Egypt exploded with joy and tears of relief after pro-democracy protesters brought down President Hosni Mubarak with a momentous march on his palaces and state TV. Emilio Morenatti/AP
Is Twitter Profitable?
2013, IPO $44.90 to $60

Next Facebook with 1 billion user with ads profit?

Stalled at 300 million users in 2015

4 million new users recent quarter: $22

Fired CEO in June 2015

Oct 2015, 300 layoffs

Finally profitable the last quarter: $7 million profit

Not sustainable profit without user growth

In comparison...

- Facebook: 1.5 billion monthly active users; used by 70% of grownups online users in the USA
- Twitter: smaller than 25%, less than Instagram and Pinterest
- Media echo chamber: Media, Celebrities, Marketers
- No meaningful 2-way communication
- 1 billion signed-up & 300 million active: 70% left the service
- Worst kind of online commenting...
- Unfiltered, unorganized feed: not content rich

Is Twitter Dying?
Class Project
Is Twitter Dying?

- Edit button?
- 10K vs 140 character limit? (Jan, 2016)
- 1 billion registered – 250 million active

#RIPTwitter

http://www.newstatesman.com/sci-tech/2015/06/are-you-one-twitters-millions-ghost-users-could-be-why
Main Point: # of tweets in serious decline

Leaked Twitter API data shows the number of tweets is in serious decline [read.bi/1KndiRx]

4:14 AM - 2 Feb 2016

159 replying
92 liking
How to keep current users engaged/tweeting?

For most people:
1. Twitter is too hard to use
2. Tweeting is scary: less confident users
3. Twitter feels lonely: talking into the winds

Core users in the Media Industry
Casual users: fast moving timeline, lack of curation
Messaging to engage less confident users?

http://www.newstatesman.com/sci-tech/2015/06/are-you-one-twitters-millions-ghost-users-could-be-why
Why Twitter is still alive?

Competition, competition!
No replacement service yet
Strings in Python

Lecture Notes modeled after: http://www.openbookproject.net/thinkcs/python/english2e/ch07.html
http://www.pythontutor.com/index.html
Strings Manipulations:
Creation, Accessing, length
Hello World!
Let’s have some fun with Python!
my_word = "Hello World!"
my_letter = my_word[0]

print my_word
print my_letter
Hello World!
H
my_word = "Hello World!"

print len(my_word)
print my_word[2:5]
print len(my_word[2:5])
Strings are immutable: can’t change a character in the string
greeting = "Hello"
print greeting
greeting[0] = 'W'  # ERROR!
Hello

TypeError: 'str' object does not support item assignment
greeting = "Hello"
new_greeting = 'W' + ' ' + greeting
print greeting
print new_greeting
Hello
W Hello
The **in** operator tests if one string is a **substring** of another.
print 'p' in 'apple'
print 'i' in 'apple'
print 'ap' in 'apple'
print 'app' in 'apple'
print 'ab' in 'apple'

print 'a' in 'a'
print 'apple' in 'apple'
True
False
True
True
True
False
True
True
True
def remove_vowels(s):
    vowels = "aeiouAEIOU"
    s_without_vowels = ""
    for letter in s:
        if letter not in vowels:
            s_without_vowels += letter
    return s_without_vowels

user_input=raw_input('Please enter your word:')
print remove_vowels(user_input)
Please enter your word: banana
bnn
#Eureka traversal: as soon as we find what we are looking for, we can cry Eureka! and stop looking

def find(string, ch):
    index = 0
    while index < len(string):
        if string[index] == ch:
            return index
        index += 1
    return -1

user_input=raw_input('please enter your word: ')
print find(user_input, 'a')
please enter your word: banana
1
Counting in String
fruit = "banana"
count = 0
for char in fruit:
    if char == 'a':
        count += 1
print count
my_word = "Hello World!"

print my_word.count('l')
print my_word.count('o')
my_word = "Hello World!"

print my_word.find("H")

print my_word.index("World")
String Slicing: a review

my_word = "Hello World!"

print my_word
print my_word[0]  # get one char of the word
print my_word[0:1]  # get one char of the word (same as above)
print my_word[0:3]  # get the first three char
print my_word[:3]  # get the first three char
print my_word[-3:]  # get the last three char
print my_word[3:]  # get all but the three first char
print my_word[:-3]  # get all but the three last character
Hello World!
H
H
Hel
Hel
Id!
Io World!
Hello Wor
my_word = "Hello World!"

start = 1
end = 5

print my_word
print my_word[start:end]  # items start through end-1
print my_word[start:]     # items start through the rest of the list
print my_word[:end]       # items from the beginning through end-1
print my_word[:]          # a copy of the whole list
Hello World!
ello
ello World!
Hello
Hello World!
Want more string manipulations?

http://www.pythonforbeginners.com/basics/string-manipulation-in-python
my_word = "Hello World!"

# SPLIT
print my_word.split(' ')  # Split on whitespace

# Startswith / Endswith
print my_word.startswith("H")
print my_word.endswith("!")
print my_word.endswith("d")
['Hello', 'World!']
True
True
True
False
my_word = "Hello World!"

# REPEATS

print my_word*3       # prints 3 times

print "."*10           # print 10 dots

# REPLACING

print my_word.replace("Hello", "Hey")
Hello World!Hello World!Hello World!

........
Hey World!
my_word = "Hello World!"

# CHANGE TO UPPER/LOWER CASE

print my_word.upper()
print my_word.lower()
print my_word.title()
print my_word.capitalize()
print my_word.swapcase()
HELLO WORLD!
hello world!
Hello World!
Hello world!
hELLO wORLD!
my_word = "Hello World!"

# REVERSING

print my_word[::-1]

begin = 1
end = 10
step = 2
print my_word[begin:end:step]

# TAKE HOME: figure out what the following mean by looking into Python manual or Googling
print ' '.join(reversed(my_word))
Hello World
# Strip off newline characters from end of the string
my_word = "   Hello World!   

#strip()  #removes from both ends
#lstrip()  #removes leading characters (Left-strip)
#rstrip()  #removes trailing characters (Right-strip)

print my_word

print my_word.strip()

print my_word.lstrip()

print my_word.rstrip()
Hello World!
Hello World!
Hello World!
Hello World!
word = "Hello World"

print word.isalnum()         #check if all char are numbers
print word.isalpha()         #check if all char in the string are alphabetic
print word.isdigit()         #test if string contains digits
print word.istitle()         #test if string contains title words
print word.isupper()         #test if string contains upper case
print word.islower()         #test if string contains lower case
print word.isspace()         #test if string contains spaces
print word.endswith('d')     #test if string endswith a d
print word.startswith('H')   #test if string startswith H
Coming Up Next:
Twitter Project
Information
Security
THANKS!

Any questions?

You can find me at
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http://www.sci.utah.edu/~beiwang/teaching/cs1060.html
Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Photographs by Unsplash