Compsci 101
Introduction
Live Lecture

Susan Rodger
Nicki Washington
January 26, 2021

```python
st = f.read().decode('utf-8')
st = st.lower()
total = len(st)
```
Announcements

- Second Survey out yesterday—complete this week
- Lab 1 is Friday
- Prelab 1 before lab—Install Python/Pycharm
  - Ways to get help:
    - Office hours, consulting hours
    - Post on Piazza – what type of machine, etc
    - https://colab.duke.edu/resources

- Back channel with Ms. Velasco: Piazza lecture note
- QZ01 due today at 1:45pm (but up through 2/4)
- Assignment 1 - Lightbot due 2/2
Is this the right course for you?

- **CompSci 101**
  - beginner
  - little or no programming experience
- **CompSci 201**
  - 4/5 on AP CS A
  - OR Programming Experience in Python or Java or ?
    - Problem solving with arrays or lists
    - Looping structures (while/for)
    - Writing functions/methods
    - Problem solving with Sets, Dictionaries or maps?
Can’t take CompSci 101 if

• You already took CompSci 201, or CompSci 116, or ENG 103 …..

• You won’t get credit for this course

• This is a beginner course
Practice, Practice, Practice
Practice, Practice, Practice
Practice results in Success
Practice results in Success
Don’t get behind!!!

- Difficult to catch up…
Don’t get behind!!!

• Difficult to catch up…
Understanding Code

Python Program

```python
if __name__ == '__main__':
    print("hello world")
```

Python Console

```python
>>> print("hello world")
hello world
```
Understanding Code
Understanding Code
Understanding Code

```python
0101011010100010 110100101011111000 100010111010001001 101010011001011001 110101001111100101 100010010100110101
```

Import . . .
...
... .read()
...
... = len(. . .)
... . . count()
How Breakout Groups Work with Google form links

• Given a bitly link
  • Type it in OR click on it on the calendar page

• What you should do:
  • Introduce yourselves
  • Each person fills out the google form
  • Includes your email, name and netid
  • Discuss each question and fill out
  • Be mindful of time
import urllib.request

def processURL(url):
    f = urllib.request.urlopen(url)
    st = f.read().decode('utf-8')
    st = st.lower()
    total = len(st)
    print("total # chars = ", total)
    print("total # z's = ", st.count("z"))
    for ch in "abcdefghijklmnopqrstuvwxyz":
        print(ch, st.count(ch))

if __name__ == '__main__':
    processURL("https://www2.cs.duke.edu/csed/data/kjv10.txt")
import urllib.request

def processURL(url):
    f = urllib.request.urlopen(url)
    st = f.read().decode('utf-8')
    st = st.lower()
    total = len(st)
    print("total # chars = ", total)
    print("total # z's = ", st.count("z"))
    for ch in "abcdefghijklmnopqrstuvwxyz":
        print(ch, st.count(ch))

if __name__ == '__main__':
    processURL("https://www2.cs.duke.edu/csed/data/kjv10.txt")
Understanding Code

```python
import urllib.request

def processURL(url):
    f = urllib.request.urlopen(url)
    st = f.read().decode('utf-8')
    st = st.lower()
    total = len(st)
    print("total # chars = ", total)
    print("total # z's = ", st.count("z"))
    for ch in "abcdefghijklmnopqrstuvwxyz":
        print(ch, st.count(ch))

if __name__ == '__main__':
    processURL("https://www2.cs.duke.edu/csed/data/kjr10.txt")
```
Barbara Liskov

- Among first women in US to earn Ph.D. in Computer Science: 1968
- Turing Award 2008, SE and PL
- Object-Oriented
  - CLU
- Liskov Substitution Principle

“Every time you exchange e-mail with a friend, check your bank statement online, or run a Google search, you are riding the momentum of her research” – MIT President Rafael Reif about Liskov
Basic Python