



# SI 507 Lab #6



October 4



# Today's Plan

Lab #6

- Regular Expressions (REGEX)
  - Homework/Project Help
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# What is a regex?

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- A text string
  - foo
  - [A-Z]+\d+
  - (?<=[a-z])(?=[A-Z])

# What is a regex?

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- A text string
  - foo matches the string *foo*
  - `[A-Z]+\d+`
  - `(?<=[a-z])(?=[A-Z])`

# What is a regex?

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- A text string
  - `foo` matches the string *foo*
  - `[A-Z]+\:\d+` matches string fragments like *F:1* and *GO:30*
  - `(?<=[a-z])(?=[A-Z])`

# What is a regex?

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- A text string
  - `foo` matches the string *foo*
  - `[A-Z]+\:\d+` matches string fragments like *F:1* and *GO:30*
  - `(?<=[a-z])(?=[A-Z])` matches the position in the string *Camel/Case* where we shift from a lower-case letter to an upper-case letter

# What is a regex for?

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- **Find** text within a larger body of text
- **Validate** that a string conforms to a desired format
- **Replace** or **insert** text at matched positions
- **Split** strings

# Activity 1

## Regex Practice

Goals: Spend time practicing regex and getting to know some common characters.

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# Activity 1: Recommended Approach

```
1 import re
2
3 str1 = 'From: stephen.marquard@uct.ac.za Sat Jan walk@12  5 09:14:16'
4 res1 = re.findall('\S+@\S+', str1)
5 print(res1)
6
7 ### guess res1
8 # one or more non-whitespace }
9 # @                          ---Break down the regex
10 # one or more non-whitespace } ---Use a cheat sheet to help
11 ### stephen.marquard@uct.ac.za }
12 ### walk@12                    ---Make a prediction about
13                                what will print
```

# Activity 1: Instructions

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- 30 minutes
- Cheat Sheet:
  - <https://bit.ly/3Eoo6PE>
- Activity Link:
  - <https://bit.ly/3e2YPQz>
- If you finish early:
  - Ask questions about HW
  - Start building classes for Project 1

# Activity 2

## iTunes Assignment

Goals: Make sure you have a good understanding of how to build the required classes and use the test file as a helper.

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# Getting Started

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- Go to Canvas > Assignments > Project 1
- Download all files to the same folder on your computer
  - Downloading the PDF is not entirely necessary
- Open `proj1_f21.py` and `proj1_f21_test.py`
- Open the PDF (instructions)

# Homework

## Current Assignments

Unittesting (HW 3): Due 10/10

iTunes (Project 1): Due 10/17



# Sources

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<https://runestone.academy/runestone/books/published/py4e-int/regex/regex-group.html> (activity 1)

[https://docs.google.com/document/d/12jSMPc\\_-xca93TXG58lyAAH0dbVDNnRbqCuiLmyC49M/edit#](https://docs.google.com/document/d/12jSMPc_-xca93TXG58lyAAH0dbVDNnRbqCuiLmyC49M/edit#) (the key I made for activity 1)

<https://www.rexegg.com/> (for best results, open in Firefox)

<https://www.debuggex.com/cheatsheet/regex/python> (searchable regex cheat sheet)

<https://pythex.org/> (allows you to check your regular expressions!)