Lesson 5:

1. Introduction

Goal is to find all the links on a web page. Reviewed how to get URL, ‘<a href=’, find, string manipulation. Computers are to save humans from tedious work.

1. Motivating Procedures

Procedure with page as input, URL as output.

1. Introducing Procedures

Input 🡪Procedure 🡪 Output

Same code can operate on many different inputs.

def <name> (<parameters>):

<block>

1. Quiz: Procedure Code

String giving the contents of the rest of the page, that way the procedure finds the first link in the rest of the web page each time, and the contents shrink until null.

1. Quiz: Output

URL and end\_quote, end\_quote is to show where the page has advanced.

1. Quiz: Return Statement

return url, end\_quote

1. Dave, Sebastian, and Junior

Self-driving cars are cool.

1. Using Procedures

How to call a procedure explained.

1. Quiz: Inc Procedure

inc() takes a number as input and outputs the number plus one.

1. Quiz: Sum Procedure

sum() does not return anything, so the function does not accomplish anything.

1. Quiz: Sum Procedure with a Return

Takes two numbers as inputs, outputs their sums. Also concatenates strings.

1. Quiz: Square

def square(input\_number):

squared\_number = input\_number \* input\_number

return squared\_number

1. Quiz: Sum of Three

def sum3(a, b, c):

return a + b + c

1. Quiz: Abbaize

def abbaize(first\_string, second\_string):

return first\_string + second\_string + second\_string + first\_string

1. Quiz: Find Second

def find\_second(search\_string, target\_string):

return search\_string.find(target\_string, search\_string.find(target\_string) + 1)

1. Quiz: Equality Comparisons

= means assignment, so == is the equality comparison

1. Quiz: If Statements

def bigger(number\_one, number\_two):

if number\_one > number\_two:

return number\_one

return number\_two

1. Quiz: Is Friend

def is\_friend(name):

if name[0] == 'D':

return True

return False

1. Quiz: More Friends

def is\_friend(name):

return name[0] == 'D' or name[0] == 'N'

1. Or

As soon as an expression is True, return True, otherwise False.

1. Quiz: Biggest

def biggest(num1, num2, num3):

if num1 > num2 and num1 > num3:

return num1

elif num2 > num3:

return num2

else:

return num3

# or max(a, b, c)

1. Quiz: While Loops

Like if but more than 0 or 1 times possible.

Answer: Print out the numbers from 1 to 10.

1. Quiz: While Loops 2

Run forever, never hits 10 since odd + 2.

1. Quiz: Print Numbers

def print\_numbers(positive\_integer\_input):

index = 1

while index < positive\_integer\_input + 1:

print(index)

index += 1

1. Quiz: Factorial

def factorial(n):

factorial\_result = 1

while n > 1:

factorial\_result \*= n

n -= 1

return factorial\_result

# or

1. Quiz: Break

Leave the while loop when condition is meant for break.

1. Multiple Assignment
2. Quiz: Multiple Assignment

Swaps the values of s and t.

1. No Links

if start\_link == -1:

return None, 0

1. Quiz: Print All Links

len(page) > 0 # True

break