Week 3

12/12/2019

Rank		Points	Problems
1	695 toxekgfx	85	27
2	ktissan	63	23
3	sajeenth19	34	8
4	593368	27	5
5	Taisunnn	19	5
6	Amsan5941	17	4
7	DeronB	12	3
7	Sohban_M	12	3
7	Aj	12	3
7	dhanush2003	12	3
11	Bhagya_K	10	3
12	Parneet_J14	9	2
12	Abhinav	9	2
14	DavidMahant	3	1
14	10deep_	3	1
14	590463	3	1

2016 J3 - Hidden Palindrome

Given a word, what is the longest palindrome that is contained in the word?

Sample input: ‘Banana’

Sample output: 5

(anana is the largest palindrome)

A palindrome is a word which is the same when read forwards as it is when read backwards

Helpful tips for this question:

list(‘string’) = [‘s’,’t’,’r’,’i’,’n’,’g’]

reversed(sequence) -> reverse iterator

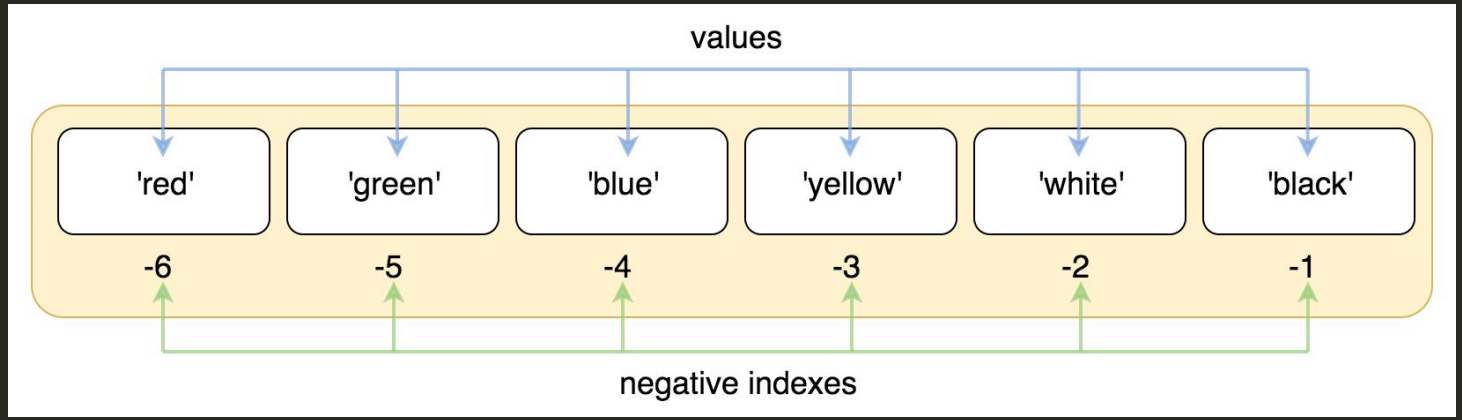
>>> reversed([1,2,3] -> [3,2,1]

>>> reverse([c,a,s,t,l,e] -> [e,l,t,s,a,c]

>>> reverse(list(‘banana’)) -> ['a', 'n', 'a', 'n', 'a', 'b']

List slicing and indexing:

>>> colours = ['red', 'green', 'blue', 'yellow', 'white', 'black']

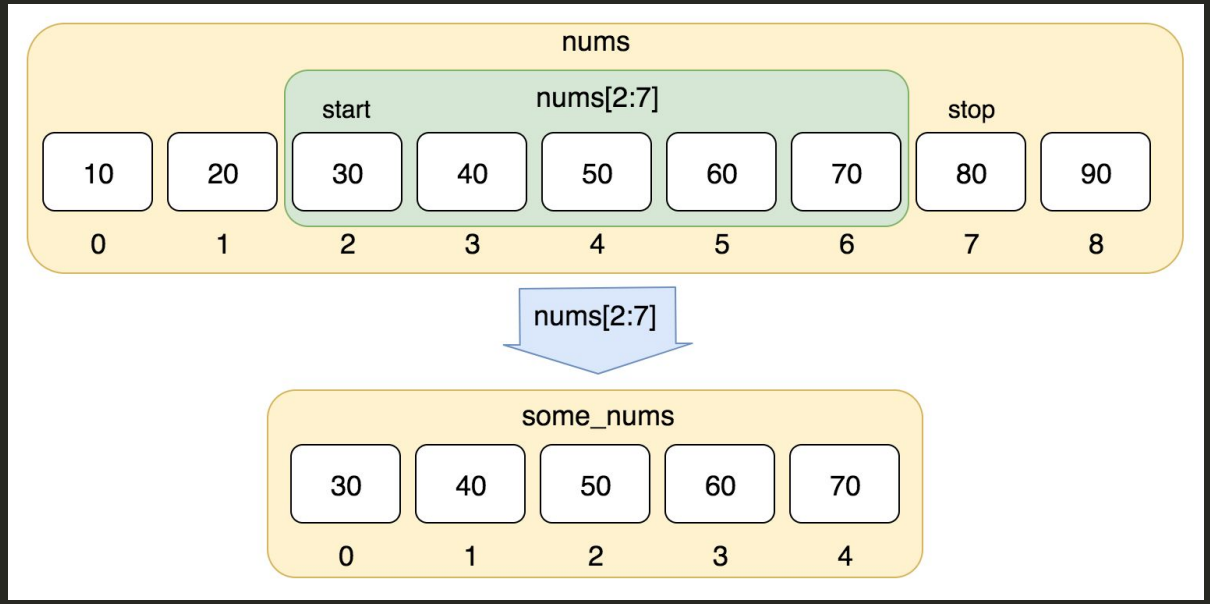


>>> colours[-1] -> ‘black’

List slicing and indexing:

>>> nums = [10, 20, 30, 40, 50, 60, 70, 80, 90]

list[start:stop]



>>> nums[2:7] -> [30,40,50,60,70]

Pseudo code

Part 1:

Find all possible sublists of the input: (‘banana’)

Loop through each letter:

    Loop though i+1 to the end of the list:

        Append string[i:j] to a new list

String = ‘banana’

>>> ['b', 'ba', 'ban', 'bana', 'banan', 'banana', 'a', 'an', 'ana', 'anan', 'anana', 'n', 'na', 'nan', 'nana', 'a', 'an', 'ana', 'n', 'na', 'a']

Now find the length largest palindrome inside this list. Using reverse() function

Problem S1: Sum Game

Part 1:

Annie records score of two teams the Swifts and the Semaphores for a set number of days.

She wants to find the highest day when both teams have the same total score

[1, 3, 3]

[2, 2, 6]

The same total score occurs on the second day

Pseudo code

Part 1:

Loop through n:

    Check if the i element is the same between both lists:

        If it is append that index value

    Else: add i to the next element

This weeks problems

Grade 11's:

CCC '17 J4 - Favourite Times

*implementation problem

Grade 12's:

CCC 2015 Senior 1: Zero That Out

*applies stacks that we learned in class

*ask me if this is the first time hearing this

***make sure there are no bugs in your code and it gets 100% when you hand it in on DMOJ**

If you finished

Grade 11’s:

CCC ‘19 S1 - Flipper

Grade 12’s:

Finish the geneva confection problem

***make sure there are no bugs in your code and it gets 100% when you hand it in on DMOJ**