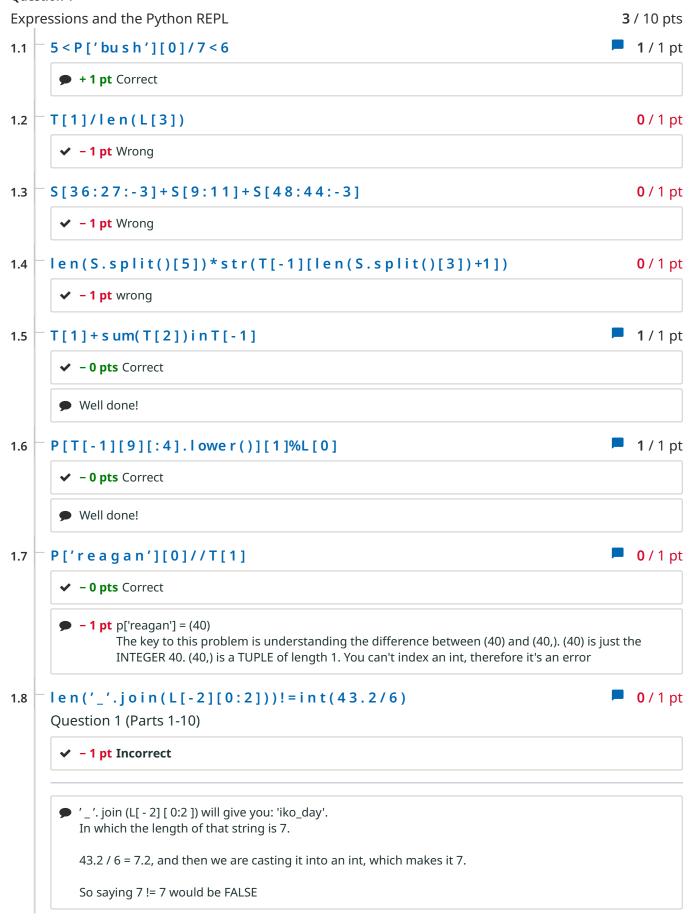
Midterm1 • Graded

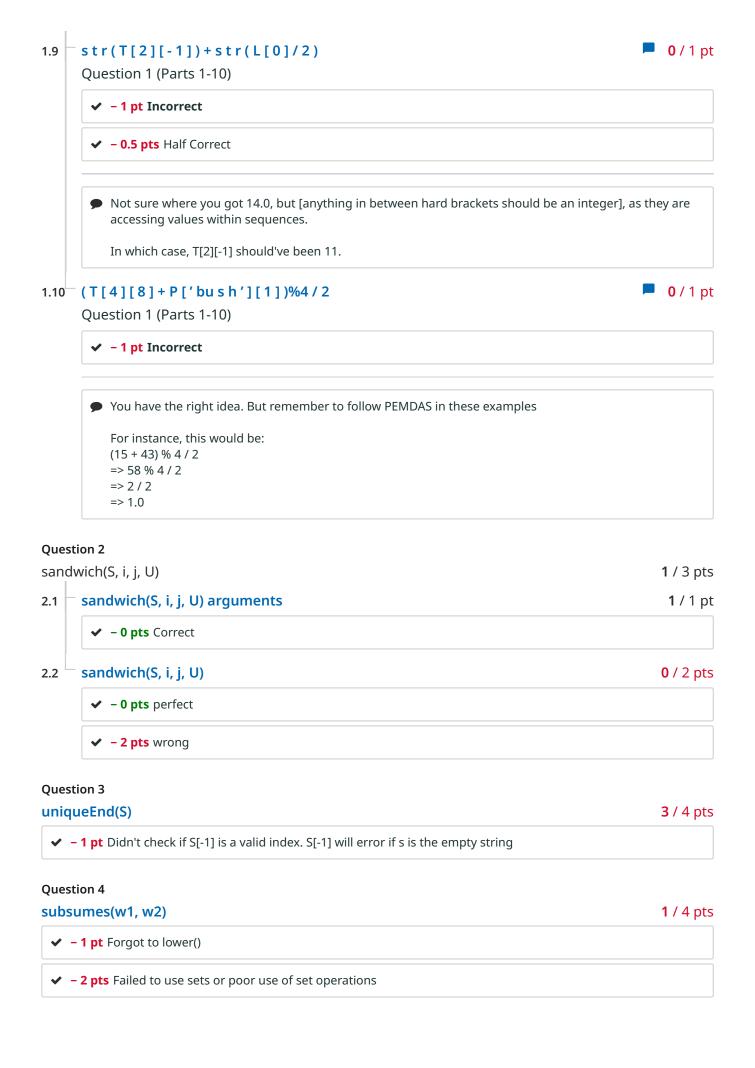
Student

Colin Cano

Total Points

8 / 25 pts





Question 5

vowelRatio(S)

0 / 4 pts

Right or Wrong



Other

✓ - 0.5 pts Unknown Call

unichar is going to just be a type. It does not represent an actual value.

We were looking for set and &, which would compare for values that appear in both sequences

You are not accounting for letters only, which you could get through '& set(alpha)'

using 'in' would return a boolean, making count either true or false.

CS1210 Computer Science I: Foundations

Exam 1

Monday, September 23, 2024

This test consists of 5 sections worth a total of 25 points. **Read each problem carefully.** Don't get stuck too long on any one question: you have 90 minutes. Please **write legibly**, and, where code indentation/alignment matter, **line things up cleanly and unambiguously!**

1. Expressions and the Python REPL [10 points]

Evaluate each of the following expressions and show the output that would be produced by the REPL. If the expression yields an error, say so and explain why. You may assume the following four statements have already been evaluated in the REPL:

T = ("Macky's back", -12, [3, 7, 11], "scarlet billows", {9:"Bush league", 8:15}).

S = "Midway upon the journey of our life I found myself within a forest dark."

L = [8, 'spy boy', ['your', 'grandma'], ('iko', 'day', 'hey', 'way'), 'fee nane']

P = { 'carter':(39), 'reagan': (40), 'bush':(41, 43), 'clinton':(42), 'ford':(38)}

>>> 5 < P['bush'][0]/7 < 6

>>> T[1]/len(L[3]) -12/12 = ()

>>> S[36:27:-3] + S[9:11] + S[48:44:-3]

efileour poesmy

>>> len(S.split()[5]) * str(T[-1][len(S.split()[3])+1]) Syntax ellor

Cunt mology string by

String

>>> T[1]+sum(T[2]) in T[-1].

>>> P[T[-1][9][:4]. lower()][1]%L[0]

γο / -[2 >>> P['reagan'][0]//T[1] CS1210 Fall 2024 2

2. sandwich(S, i, j, U) [3 points]

Recall QotD4, where you were asked to write a function sandwich(S, i, j, U) which takes two sequences, S and U, and two non-negative integers i and j and returns a new sequence where the elements of U appear sandwiched in between the first i elements and the last j elements of S.

Our first solution attempt was:

Pascenduichar K

def sandwich(S, i, j, U): return(S[:i] + U + S[-j:])

Assuming we now restrict both i and j to be less than len(S), can you think of a set of arguments (values of S, i, j and U) that still cause this solution to fail? Explain the nature of the failure, if any.

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3.	uniq	ueEn	d(S)	[4	points]	I
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1	
Specification: uniqueEnd(S) takes a sequence, S, and returns True if and only if the last element o sequence S is unique within S; otherwise, it returns False.	f
>>> uniqueEnd([1, 2, 1, 3, 1]) False	:.
def uniqueEnd(S): #Use dots to keep your code aligned	
return (S[-i] not in S[:-i]).	

For full credit, your solution should be legible, concise, elegant, properly indented, and should avoid extraneous statements or constructs not yet covered in class or the assigned readings.

4. subsumes(w1, w2) [4 p

Specification: subsumes(w1, w2) takes two strings, w1 and w2, composed only of upper and lower case letters (no digits, spaces, or punctuation: these are essentially "words"), and returns True if either w1 subsumes w2 or w2 is subsumed by w1. Here, "is subsumed by" means "has its elements contained entirely within the other, independent of order or case."

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For full credit, your solution should be legible, concise, elegant, properly indented, and should avoid extraneous statements or constructs not yet covered in class or the assigned readings.

CS1210 Fall 2024

chi char in vowels

(etcm (wowels/unichar)

5

5. vowelRatio(S) [4 points]

Specification: vowelRatio(S) takes a string, S, and returns an integer representing the ratio of unique vowels in S (where vowels are 'a', 'e', 'i', 'o', and 'u') to unique characters in S.

- >>> vowelRatio('are')
- 66 #2 (unique) vowels, 3 (unique) characters
- >>> vowelRatio('vowel')
- 40 #2 (unique) vowels, 5 (unique) characters

vowe 1

Note that duplicate characters are ignored in both the vowel count and the overall character count in S. Note also that the function signature provides for a second parameter, alpha, which defaults to a string containing all 26 lower case characters in the Roman alphabet. Finally, upper and lower case characters should be treated as being the same, and non-alphabetic characters should be ignored. So:

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For full credit, your solution should be legible, concise, elegant, properly indented, and should avoid extraneous statements or constructs not yet covered in class or the assigned readings.

feel free to use as scratch paper