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Exercise 1

Finger Exercises due Aug 5, 2020 20:30 -03

Exercise 1

5/5 points (graded)

ESTIMATED TIME TO COMPLETE: 10 minutes

Here is some code from lecture:

```
def linearSearch(L, x):
    for e in L:
        if e == x:
            return True
    return False
```

Choose which of the following inputs to linearSearch would give the best case, average case, or worst case run time.

1. Best Case Run Time

```
linearSearch([14, 15, 6, 27, 13, 16, 25, 11, 7], 15)

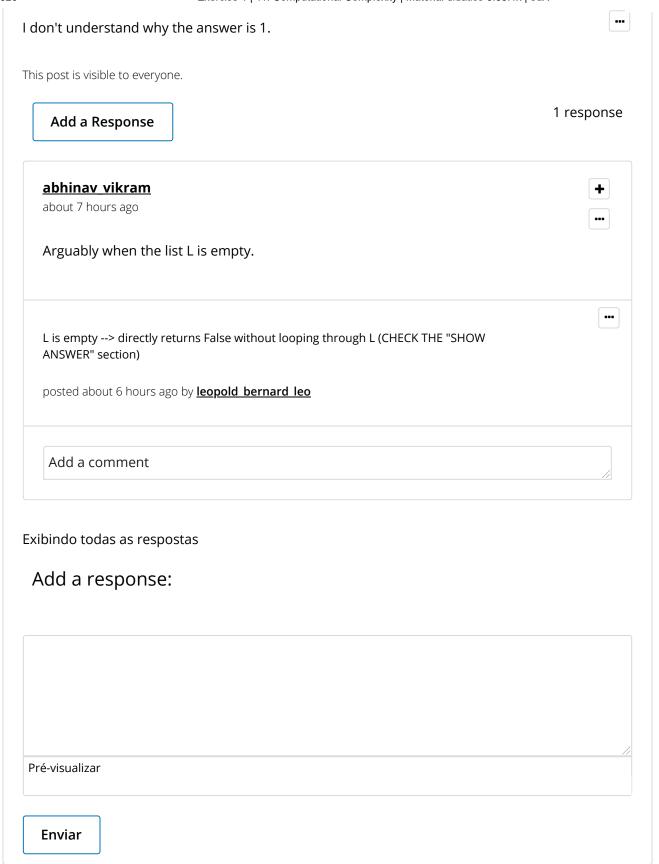
linearSearch([21, 1, 25, 22, 30, 13, 7, 24, 12], 24)

linearSearch([20, 10, 1, 7, 4, 22, 25, 12, 31], 20)

linearSearch([9, 3, 12, 24, 7, 8, 23, 11, 19], 8)
```

	linearSearch([4, 12, 20, 17, 9, 14, 7, 24, 6], 7)
	linearSearch([13, 9, 22, 3, 10, 17, 11, 2, 12], 26)
~	
Wors	t Case Run Time
	linearSearch([14, 15, 6, 27, 13, 16, 25, 11, 7], 15)
	linearSearch([21, 1, 25, 22, 30, 13, 7, 24, 12], 24)
	linearSearch([20, 10, 1, 7, 4, 22, 25, 12, 31], 20)
	linearSearch([9, 3, 12, 24, 7, 8, 23, 11, 19], 8)
	linearSearch([4, 12, 20, 17, 9, 14, 7, 24, 6], 7)
	linearSearch([13, 9, 22, 3, 10, 17, 11, 2, 12], 26)
	1111eai 3eai Cii([13, 3, 22, 3, 10, 17, 11, 2, 12], 20)
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4	What is the number of steps it will take to run linearSearch in the best case?
	Express your answer in terms of n , the number of elements in the list \Box .
	Indicate addition and multiplication explicitly, with + and * symbols. Indicate exponentiation with the caret (^) symbol.
	1
5	What is the number of steps it will take to run $ $ linearSearch in the worst case? Express your answer in terms of n , the number of elements in the list $ $ L $ $
	Indicate addition and multiplication explicitly, with $\ +\ $ and $\ *\ $ symbols. Indicate exponentiation with the caret ($\ $) symbol.
	2*n+1
	$2\cdot n+1$
points	der: You do not lose points for trying a problem multiple times, nor do you lose if you hit "Show Answer". If this problem has you stumped after you've tried it anes, feel free to reveal the solution.
Click t	ne "Reset" button to clear your answers.
Env	iar
✓ (Correct (5/5 points)
Exer	cise 1 Ocultar discussão
Topic: L	ecture 11 / Exercise 1 Add a Post
∢ Al	Posts
	ir someone explain #4
ques	tion posted about 7 hours ago by anônimo



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