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gauravsharma727545@gmail.com

NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Programming, Data Structures And Algorithms Using Python (course)

Announcements (announcements)

About the Course (https://swayam.gov.in/nd1_noc19_cs40/preview) Ask a Question (forum)

Progress (student/home) Mentor (student/mentor)

Course outline

- **How to access the portal**
- **Week 1: Introduction**
- **Week 1 Quiz**
- **Week 2: Basics of Python**
- **Week 2 Quiz**
- **Week 2 Programming Assignment**
- **Week 3: Lists, inductive function**

Online Test 2, Question 2

Due on 2019-09-26, 22:00 IST

Instructions

This is the second of two online programming tests.

- These tests account for 25% of the total evaluation for the course.
- The duration of the test is 2 hours.
- The first test was from 9:30-11:30 am and the second is from 8:00-10:00 pm, on Thursday, 26 September 2019.
- You can attempt either of the tests. The best score will be counted..

Question 2

Here is a function `stablesortbad` that takes a list of pairs of integers as input and sorts them by the second coordinate in each pair. A *stable sort* preserves the order of pairs that have an equal second coordinate. This is not a stable sort. Provide an input for which `stablesortbad` produces an output that is not stably sorted. Your input should be a list of pairs of integers of the form [(i1,j1),(i2,j2),...,(in,jn)].

```
def stablesortbad(l):
  for j in range(len(l)-1):
    for i in range(len(l)-1):
      if l[i][1] >= l[i+1][1]:
        (l[i],l[i+1]) =  (l[i+1],l[i])
  return(l)
```

Open up the code submission box below and write your test case where you would normally paste your code. Your input should be a list of pairs of integers of the form [(i1,j1),(i2,j2),...,(in,jn)].

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1		`True\n`	`True\n`	Passed

Due Date Exceeded.
1 out of 1 tests passed.
You scored 100.0/100.

Your last recorded submission was :

```
1 myinput = '''
2 [(1,2),(3,1),(7,2),(0,4),(3,2)]
3 '''
4
5 def stablesortbad(l):
6   for j in range(len(l)-1):
```

```
    for i in range(len(l)-1):
      if l[i][1] >= l[i+1][1]:
        (l[i],l[i+1]) =  (l[i+1],l[i])
  return(l)

def stablesortgood(l):
  for j in range(len(l)-1):
    for i in range(len(l)-1):
      if l[i][1] > l[i+1][1]:
        (l[i],l[i+1]) =  (l[i+1],l[i])
  return(l)

import ast

try:
   myarg =  ast.literal_eval(myinput.strip())
except:
   print(False)
else:
  try:
     print(stablesortbad(myarg[:]) != stablesortgood(myarg[:]))
  except:
     print(False)

```

(/noc19_cs40/progassignment?name=125)

- Online Test 2, Question 6 (/noc19_cs40/progassignment?name=126)
- Online Test 2, Question 7 (/noc19_cs40/progassignment?name=127)
- Online Test 2, Question 8 (/noc19_cs40/progassignment?name=128)
- Online Programming Test 2, 26 Sep 2019, 20:00-22:00 (unit?unit=111&lesson=129)