Course outline

How does an NPTEL online course work? ()

Week 1 : Introduction ()

Week 1 Quiz ()

Week 2: Basics of Python ()

Week 2 Quiz ()

Week 2 Programming Assignment ()

Week 3: Lists, inductive

Online Test 2, Question 2

Due on 2021-03-09, 22:00 IST

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)].

Sample Test Cases

	Input	Output
Test Case 1		`True`
Test Case 2		`True`

The due date for submitting this assignment has passed.

function definitions, sorting ()

Week 3 Programming Assignment ()

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension ()

Week 4 Quiz ()

Week 4 Programming Assignment ()

Week 5: Exception handling, input/output, file handling, string processing ()

Week 5 Programming Assignment ()

Week 6: Backtracking, scope, data structures; stacks, queues and heaps ()

Week 6 Quiz ()

As per our records you have not submitted this assignment.

Sample solutions (Provided by instructor)

```
myinput = '''
[(2,3),(5,4),(3,4),(0,1)]
'''

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)

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)

```

- **Week 7: Classes, objects and user defined datatypes ()**
- **Week 7 Quiz ()**
- **Week 8: Dynamic programming, wrap-up ()**
- **Week 8 Programming Assignment ()**
- **Text Transcripts ()**
- **Books ()**
- **Download Videos ()**
- **Online Programming Test - Sample ()**
- **Online Programming Test 1, 01 Dec 2020, 10:00-12:00 ()**
- **Online Programming Test 2, 01 Dec 2020, 20:00-22:00 ()**
- **Online Programming Test 1, 09 Mar 2021, 10:00-12:00 ()**

Online Programming Test 2, 09 Mar 2021, 20:00-22:00 ()

- Online Test 2, Question 1 (/noc20_cs26/progassignment?name=160)
- **Online Test 2, Question 2 (/noc20_cs26/progassignment?name=161)**
- Online Test 2, Question 3 (/noc20_cs26/progassignment?name=162)
- Online Test 2, Question 4 (/noc20_cs26/progassignment?name=163)
- Online Test 2, Question 5 (/noc20_cs26/progassignment?name=164)
- Online Test 2, Question 6 (/noc20_cs26/progassignment?name=165)
- Online Test 2, Question 7 (/noc20_cs26/progassignment?name=166)
- Online Test 2, Question 8 (/noc20_cs26/progassignment?name=167)