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



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

Sample Online Test Question 2

Due on 2021-03-09, 23:59 IST

Instructions

There will be two online programming tests on 9 March, 2021. This is a sample test to explain what the actual test will look like.

- These tests account for 25% of the total evaluation for the course.
- The duration of the test is 2 hours.
- The first test will be from 10:00 am–12:00 noon and the second from 8:00 pm–10:00 pm, on Tuesday, 9 March, 2021.
- You can attempt one or both of the tests. The best score will be counted..

Question 2

Here is an implementation of mergesort, along with the associated merge function. There is a small error in the implementation. Provide an input list for which this version of mergesort produces an incorrect output.

```
def mergebad(l1,l2):

    (lmerged,i,j) = ([],0,0)

    while i+j < len(l1) + len(l2):
        if i == len(l1):
            lmerged.append(l2[j])
            j = j+1
        elif j == len(l2):
            lmerged.append(l1[i])
```

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 ()

```
        i = i+1
    elif l1[i] < l2[j]:
        lmerged.append(l1[i])
        i = i+1
    elif l2[j] < l1[i]:
        lmerged.append(l2[j])
        j = j+1
    else:
        lmerged.append(l1[i])
        i = i+1
        j = j+1

    return(lmerged)

def mergesortbad(l):
    if len(l) < 2:
        return(l)
    else:
        n = len(l)
        leftsorted = mergesortbad(l[:n//2])
        rightsorted = mergesortbad(l[n//2:])
        return(mergebad(leftsorted,rightsorted))
```

Open up the code submission box below and write your test case where you would normally paste your code.

Sample Test Cases

	Input	Output
Test Case 1	<input type="text"/>	<input type="text" value="True"/>
Test Case 2	<input type="text"/>	<input type="text" value="True"/>

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

**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 ()**

- ☐ Sample Online
Test Question
1
(/noc20_cs26/progassignment?
name=118)
- ☐ **Sample
Online Test
Question 2
(/noc20_cs26/progassignment?
name=119)**
- ☐ Sample Online
Test Question
3
(/noc20_cs26/progassignment?
name=120)
- ☐ Sample Online
Test Question
4
(/noc20_cs26/progassignment?
name=121)

☐ Sample Online
Test Question
5
(/noc20_cs26/progassignment?
name=122)

☐ Sample Online
Test Question
6
(/noc20_cs26/progassignment?
name=123)

☐ Sample Online
Test Question
7
(/noc20_cs26/progassignment?
name=124)

☐ Sample Online
Test Question
8
(/noc20_cs26/progassignment?
name=125)

**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
()**

