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reviewer4@nptel.iitm.ac.in ▾

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)

Unit 15 - Week 6 Quiz

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
definitions,
sorting

Week 3
Programming
Assignment

Week 4: Sorting,
Tuples,

Week 6 Quiz

The due date for submitting this assignment has passed. Due on 2019-09-11, 23:59 IST. As per our records you have not submitted this assignment.

All questions carry equal weightage. All Python code is assumed to be executed using Python3. You may submit as many times as you like within the deadline. Your final submission will be graded.

Note:

- If the question asks about a value of type `string`, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type `list`, remember to enclose your answer in square brackets and use commas to separate list items.

1) Suppose u and v both denote sets in Python. Under what condition can we guarantee that **2.5 points**
 $u - (u - v) == v$?

- The sets u and v should be disjoint.
- The set v should be a subset of the set u .
- The set u should be a subset of the set v .
- This is true for any u and v .

No, the answer is incorrect.

Score: 0

Feedback:

From u you take away all elements that are not in v and you are left with $u \cap v$. Since $u \cap v = v$, we have v is a subset of u .

Accepted Answers:

The set v should be a subset of the set u .

2) Suppose u and v both denote sets in Python. Under what condition can we guarantee that **2.5 points**
 $u|v == u^v$?

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

- Quiz : Week 6 Quiz (assessment? name=96)

Week 7: Classes, objects and user defined datatypes

Week 7 Quiz

Week 8: Dynamic programming, wrap-up

Week 8 Programming Assignment

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Text Transcripts

Online Programming Test - Sample

- The sets u and v should be disjoint.
- The set u should be a subset of the set v .
- The set v should be a subset of the set u .
- This is true for any u and v .

No, the answer is incorrect.

Score: 0

Feedback:

$u \cap v$ has all elements that are in exactly one of u or v . This is the same as $u \setminus v \cup v \setminus u$. Since $u \cap v = u \setminus v \cup v \setminus u$, we have $u \cap v$ is empty, so u and v are disjoint.

Accepted Answers:

The sets u and v should be disjoint.

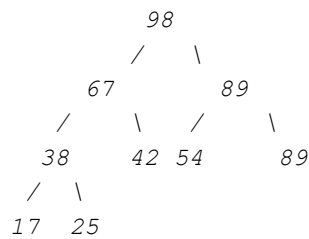
3) Suppose we insert 97 into the max heap [98,67,89,38,42,54,89,17,25]. What is the resulting heap?

No, the answer is incorrect.

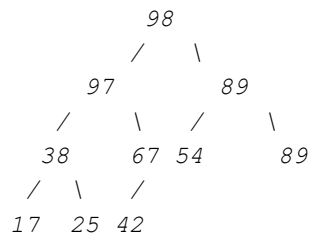
Score: 0

Feedback:

The heap is



After inserting 97, we have



Accepted Answers:

(Type: Regex Match) `[0-9]*[98][0-9]*,[0-9]*[97][0-9]*,[0-9]*[89][0-9]*,[0-9]*[38][0-9]*,[0-9]*[67][0-9]*,[0-9]*[54][0-9]*,[0-9]*[89][0-9]*,[0-9]*[17][0-9]*,[0-9]*[25][0-9]*,[0-9]*[42][0-9]*`

2.5 points

4) Suppose we we apply `delete_max()` twice to the heap [100,97,93,38,67,54,93,17,25,42]. What is the resulting heap?

No, the answer is incorrect.

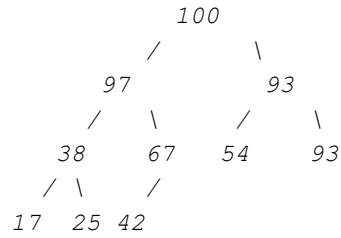
Score: 0

Feedback:

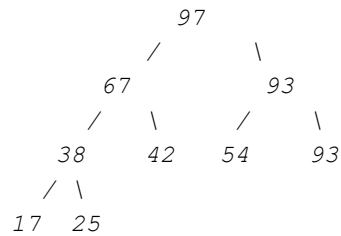
The original heap is

Online
Programming
Test 1, 26 Sep
2019, 09:30-11:30

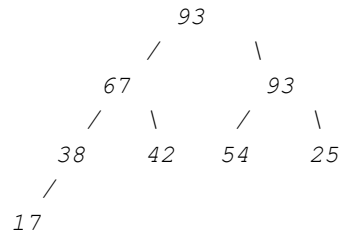
Online
Programming
Test 2, 26 Sep
2019, 20:00-22:00



After one delete max, we have



After one more delete max, we have



Accepted Answers:

(Type: Regex Match) `[]*93[]*,[]*67[]*,[]*93[]*,[]*38[]*,[]*42[]*,[]*54[]*,[]*25[]*,[]*17[]*`

2.5 points