

[CS 11] Prac 2f – Range-Containing Sets

oj.dcs.upd.edu.ph/problem/cs11prac2f

Cheatsheet is available here: <https://oj.dcs.upd.edu.ph/cs11cheatsheet/>

Problem Statement

You are given two integers x and y .

Given a sequence of *sets*, return the sets among those that contain *all integers from x to y , inclusive*.

Task Details

Implement a function called `sets_containing_range`:

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```
def sets_containing_range(x, y, intsets):
```

- `x`—int
- `y`—int
- `intsets`—tuple of frozensets of ints

Return a tuple of frozensets of ints.

Restrictions

(See 2a for more restrictions)

For this problem:

- Up to 11 function definition is allowed.
- Recursion is **disallowed**. (The recursion limit has been greatly reduced.)
- Comprehensions are allowed.
- `range` is allowed.
- The source code limit is 500500.

Example Calls

Example 1 Function Call

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```
sets_containing_range(3, 6, (
    frozenset((3, 4, 5, 6, 7)),
    frozenset((2, 3, 4, 5, 6, 8)),
    frozenset((1, 2, 3, 5, 6, 7, 8)),
    frozenset(()),
    frozenset((3, 4, 5, 6)),
    frozenset((1, 2, 3, 4, 5)),
    frozenset((4, 5, 6, 7, 8)),
    frozenset((1, 2, 3, 4, 5, 6, 7, 8)),
))
```

Example 1 Return Value

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```
(  
    frozenset((3, 4, 5, 6, 7)),  
    frozenset((2, 3, 4, 5, 6, 8)),  
    frozenset((3, 4, 5, 6)),  
    frozenset((1, 2, 3, 4, 5, 6, 7, 8)),  
)
```

Constraints

- The function `sets_containing_range` will be called at most 100100 times.
- Each `frozenset` in the input has at most 4040 elements.
- Each `int` in the input has absolute value at most 102010^{20} .
- $y-x \leq 10$

Scoring

- You get 100100 ❤️ points if you solve all test cases.