[CS 11 25.1] Lab 3a – Compatibility

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

Submit solution [CS 11 25.1] Lab Exercise 3

Points: 120 (partial)
Time limit: 7.0s
Memory limit: 2G

Problem type

Allowed languages
py3

Problem Statement

There are n intervals, numbered 1 to n.

How many pairs of integers (i, j) are there with $1 \leq i < j \leq n$ such that intervals i and j *intersect*? Two intervals intersect if some integer is in both intervals.

Note. An *interval* is given in the form $[\ell, r)$, which consists of all integers x such that $\ell \leq x < r$.

Task Details

Your task is to implement a function named `num_intersecting_pairs`, which should have the following *signature*:

```
def num_intersecting_pairs(intervals):
```

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The above says that it has one argument `intervals`. This is a length-n `tuple` of pairs (tuples of length 2) denoting the n intervals.

The function must return an integer (`int`) denoting the number of intervals that intersect.

Restrictions

- Your source code must have at most $1{,}000$ bytes.
- The following symbol is allowed: `sorted`.

Examples

Example 1 Function Call

```
num_intersecting_pairs(((1, 3), (4, 7), (2, 4), (8, 9)))
```

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Example 1 Return Value

```
1
```

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Constraints

- The function `num_intersecting_pairs` will be called at most 100 times.
- $0 \leq \ell < r \leq 10^{20}$
- The length of `intervals` is at most 50.

Scoring

Note: New tests may be added and all submissions may be rejudged at a later time. (All future tests will satisfy the constraints.)

- You get 120 ❤ points if you solve all test cases.

Clarifications

Report an issue

No clarifications have been made at this time.