[CS 11] Prac 3e – Thy Neighbors

oj.dcs.upd.edu.ph/problem/cs11prac3e

Submit solution
Points: 125 (partial)

Time limit: 4.0s

Memory limit: 1G

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Problem type

Allowed languages

~~NONE~~, py3

Problem Statement

There are n+1$n+1$ homeowners in a single street. We number the houses 0$0$ to n n from left to right along the street.

We will represent the street as the number line, so that each house has a coordinate.

We know that the coordinate of house 0$0$ is 0$0$. We also know the distance between house 0$0$ and house 1$1$, as well as house 2$2$ and house 3$3$, and so on until houses n−1$n-1$ and house nn.

Find the coordinates of the n+1$n+1$ houses.

Task Details

Your task is to implement a function called `house_locations`. This function has a single parameter, a `tuple` of nn `int`s representing the nn distances in order from left to right.

The function must return a `tuple` of n+1$n+1$ `int`s, where the element at index ii is the coordinate of house ii.

Restrictions

For this problem:

- Recursion is allowed.
- Up to 88 functions are allowed.
- Comprehensions are **disallowed**.
- The `range`, `min`, `max`, and `sum` symbols are **disallowed**.
- The source code limit is 400400.

Example Calls

Example 1 Function Call

Copy

```
house_locations((2, 7, 1, 8))
```

Example 1 Return Value

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```
(0, 2, 9, 10, 18)
```

Constraints

- The function `house_locations` will be called at most 200200 times.
- $1 \leq n \leq 501 \leq n \leq 50$
- Each distance value is between 11 and 102010^{20}, inclusive.

Scoring

- You get 125125 ❤️ points if you solve all test cases.

Report an issue

Clarifications

No clarifications have been made at this time.