[CS 11] Prac 5k – Updating List

Problem Statement

Construct a list of n integers by initializing it with all 0s and then updating its elements according to a list of *update data*. The update data is a sequence of pairs (i, v) of integers. Each pair (i, v) says that you should set the element at index i to v.

Return the list after all the updates.

Process the update data in order.

Task Details

Implement a function called `make_list_with_updates`:

```
def make_list_with_updates(n, updates):
```

- `n` — `int`
- `updates` — `tuple` of pairs `(int, int)`

Return a `list` of `int`s.

Restrictions

For this problem:

- Loops and lists are allowed.
- Additional functions are **disallowed**.
- Recursion is **disallowed**. (The recursion limit has been greatly reduced.)
- Comprehensions are **disallowed**.
- The following names are now allowed: `range`, `list`, `print`, `append`, `pop`, `extend`, `remove`, `sort`, `insert`, `clear`, `reverse`.
- The source code limit is 350.

Example Calls

Example 1 Function Call

```
make_list_with_updates(7, (
    (2, 5),
    (1, 10),
    (6, 5),
    (1, -5),
    (1, -5),
    (3, 0),
    (4, 4)
))
```

Example 1 Return Value

```
[0, -5, 5, 0, 4, 0, 5]
```

Constraints

- The function `make_list_with_updates` will be called at most $50{,}000$ times.
- The sum of n across all inputs will be will be at most $200{,}000$.
- The sum of q across all inputs will be will be at most $200{,}000$.
- $1 \le n, q \le 100{,}000$.
- $0 \le i < n$.
- $|v| \le 10^{10}$.

Scoring

- You get 80 ❤ points if you solve all test cases where:
  - $n \le 4{,}000$
  - $q \le 4{,}000$
  - the sum of n will be at most $8{,}000$.
  - the sum of q will be at most $8{,}000$.
- You get 40 ❤ points if you solve all test cases.

Submit solution [CS 11] Practice 5 ❤

My submissions ❤

Points: 120 (partial)
Time limit: 6.0s
Memory limit: 1G

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Problem type

Allowed languages
~~NONE~~, py3

Clarifications

Report an issue

No clarifications have been made at this time.