# 2336. Smallest Number in Infinite Set

You have a set which contains all positive integers [1, 2, 3, 4, 5, ...].

Implement the SmallestInfiniteSet class:

SmallestInfiniteSet() Initializes the SmallestInfiniteSet object to contain all positive integers.

int popSmallest() Removes and returns the smallest integer contained in the infinite set.

void addBack(int num) Adds a positive integer num back into the infinite set, if it is not already in the infinite set.

## SOLUTION IN C++

class SmallestInfiniteSet {

public:

int popSmallest() {

if (added.empty())

return curr++;

const int min = \*added.begin();

added.erase(added.begin());

return min;

}

void addBack(int num) {

if (num < curr)

added.insert(num);

}

private:

int curr = 1;

set<int> added;

};