

CSE 332: Data Abstractions

Section 1: WorkLists

WorkList ADT

add(work)	Notifies the worklist that it must handle work
peek()	Returns the next item to work on
next()	Removes and returns the next item to work on
hasWork()	Returns true if there's any work left and false otherwise

0. Interview Question: The Missing Number

Suppose `nums` is a `WorkList` of size n which contains each number between 1 and n exactly once. A user calls `nums.next()` but forgets to save the value. Recover the value that was removed. Can you do it if two values are removed? What are the time and space complexity of your solution?

1. Subset Sum

The `subsetSum` problem is:

Given a number `sum` and an `int[] arr`, is there a subset of the elements in `arr` that sum to `sum`?

Fill in this recursive solution:

```
1 subsetSum(sum, idx, arr) {
2   if (sum == 0) {
3     return ;
4   }
5
6   if (idx == arr.length) {
7     return ;
8   }
9
10  return subsetSum(, , arr) ||
11     subsetSum(, , arr);
12 }
```