

# 4. Hash tables

# Hash tables

- Want a way to store things and look them up quickly
- Naive way: look through the whole array:  $A = [2, 1, 3, n, n-1, \dots, 4]$
- How long to check presence?
  - $O(n)$ : may need to check every element in order
- Can do better if array is sorted:
  - Binary search:  $O(\log(n))$
- What about if data is unsorted?