A Short Catalog of Test Ideas for…

Any object
- The **null** pointer

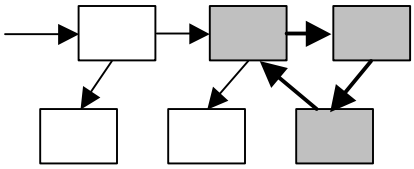
Strings
- The **empty** string

Collections
- an **empty** collection
- contains **exactly one** element
- the **maximum** possible size (or, at least, more than one element)
- has **duplicate** elements

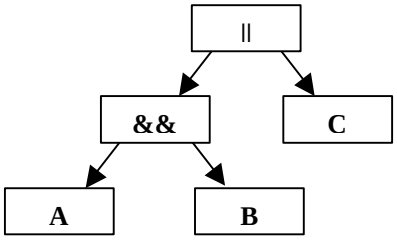
Searching
- Match **not found**.
  If possible, a matching element should be placed just past the bounds of the search. If the boundaries are handled incorrectly, this increases the chance of an observable failure.
- **Exactly one** match.
  (It's best if the match is in the last position.)
- **More than one** match in the collection.

Linked structures (trees, queues, graphs, etc.)

- **empty** (nothing in structure)
- **minimal non-empty** structure
- a **circular** structure

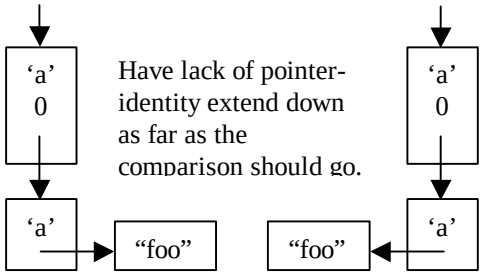


- depth **greater than one** (or maximally deep)
  The test must make the code descend to that depth.



Equality comparison of two objects

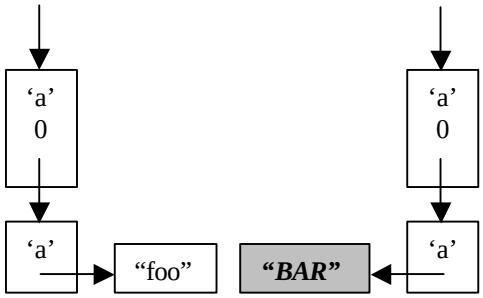
- **equal but not identical**



Have lack of pointer-identity extend down as far as the comparison should go.

Elements not to be used in the equality comparison should be unequal

- **different at the lowest level** of comparison



Numbers
- **0**
- the **smallest** number
- **just below the smallest** number
- the **largest** number
- **just above the largest** number

Pairs of numbers that might be used to allocate resources
- make **both** numbers the **largest** possible
- make **both** numbers the **smallest** possible (less useful)