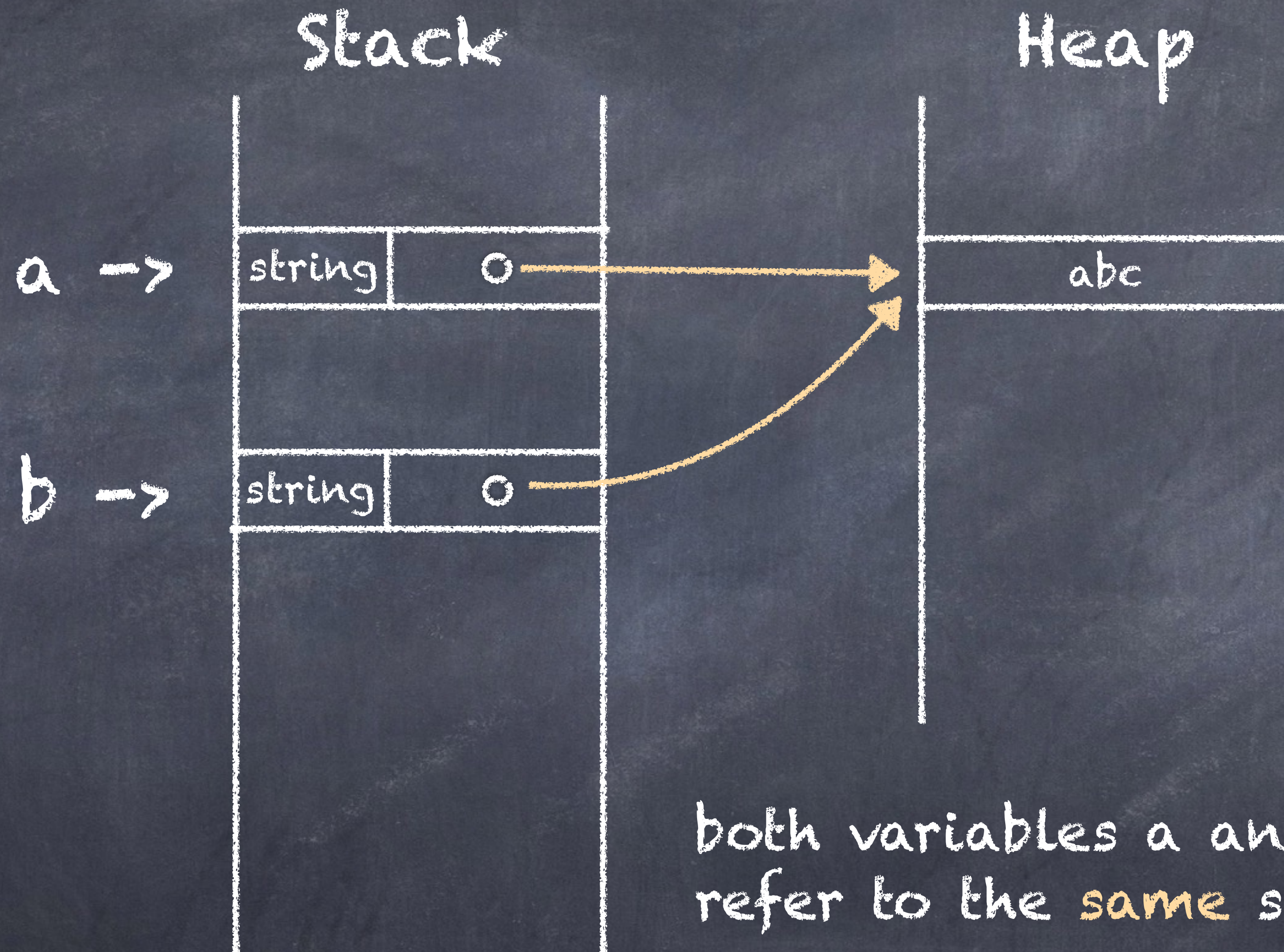
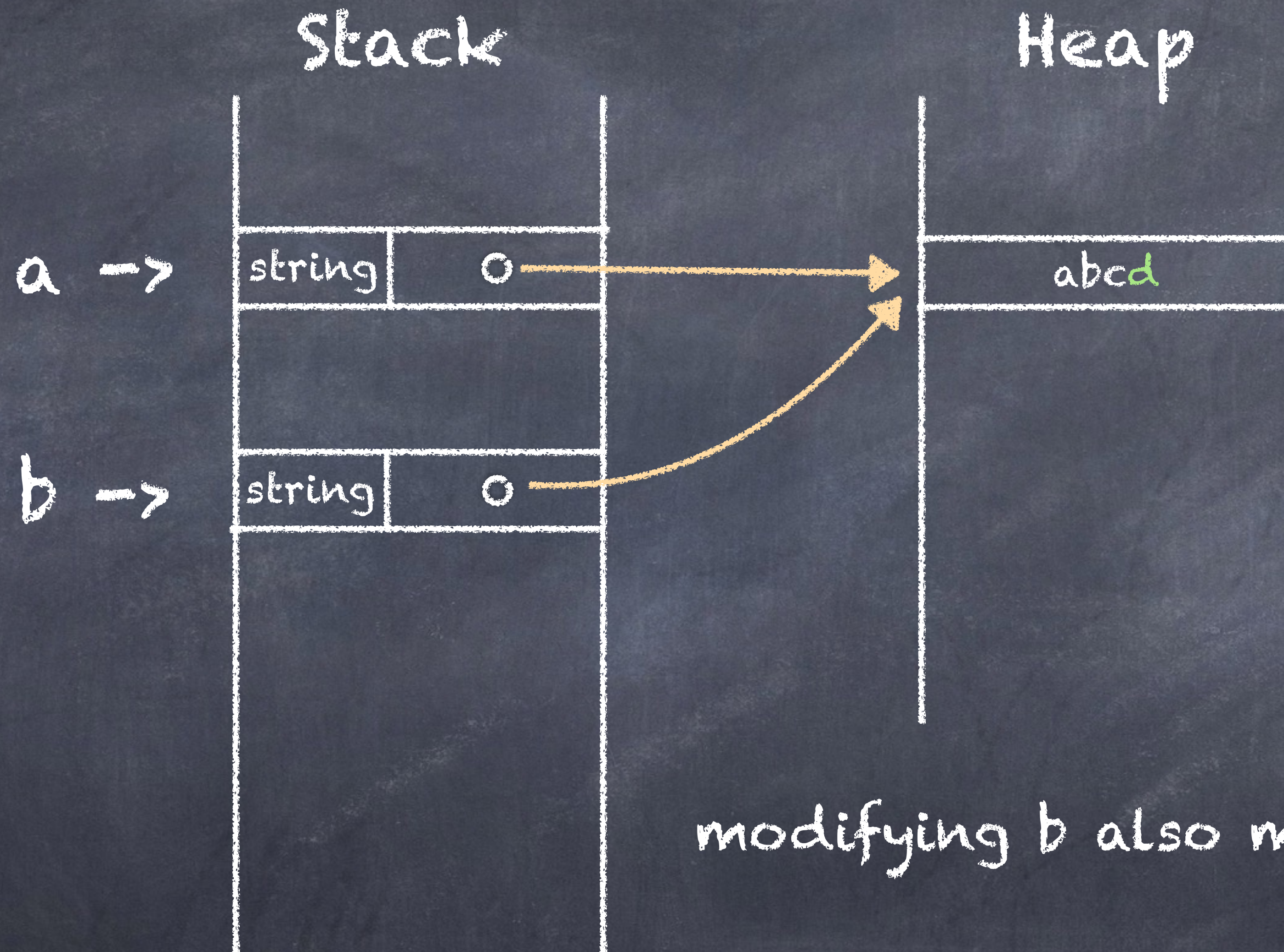


Immutable strings











# Stack

a →

string	abc
string	abc

b →

Variables a and b refer to  
separate strings



# Stack

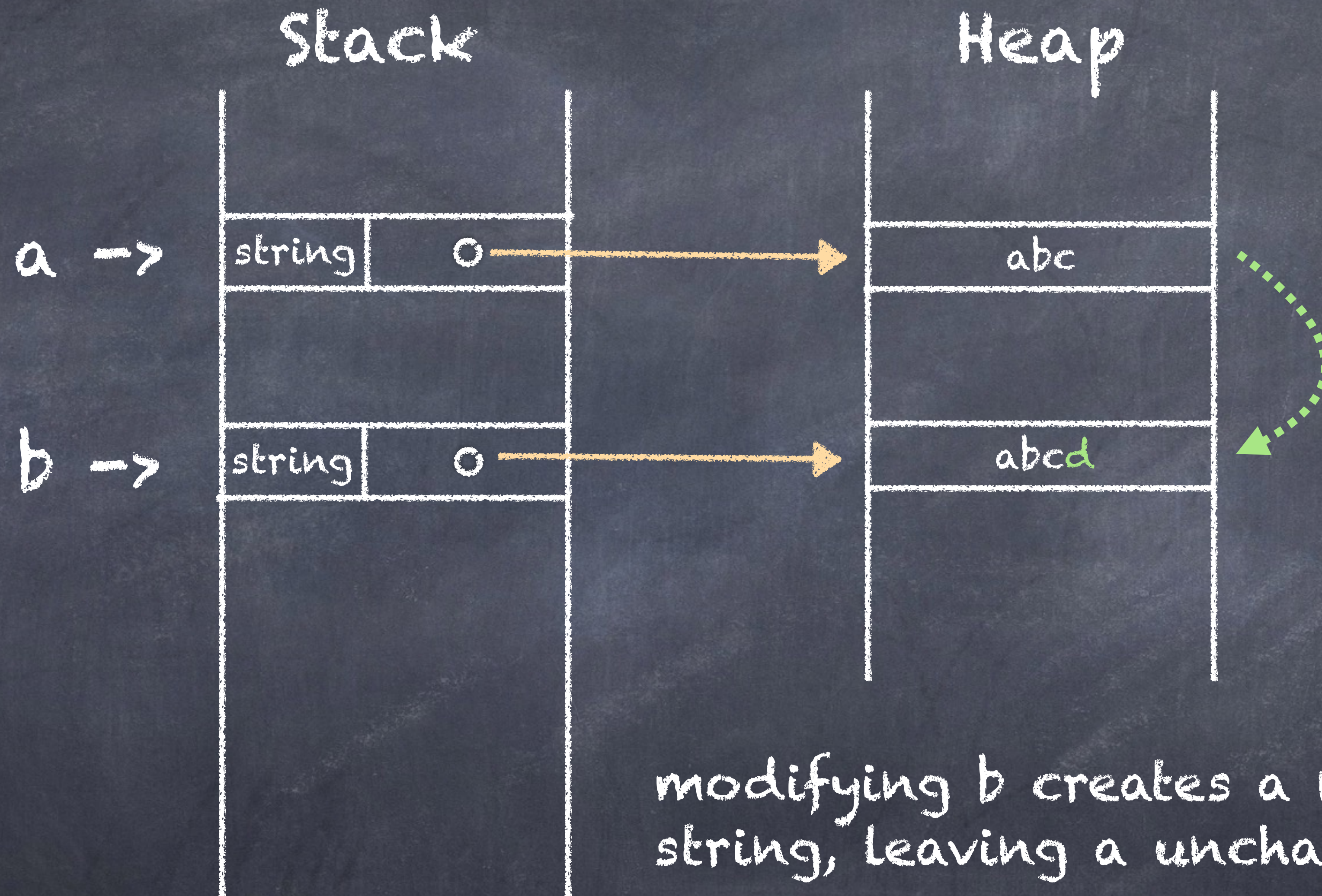
a →

string	abc
string	abcd

b →

Modifying b has no  
affect on a





modifying b creates a new string, leaving a unchanged



# Benefits

- **Thread safety:** Immutable strings are thread-safe
- **Memory savings:** Identical strings can be merged
- **Fast assignment:** Copy a string by copying the reference
- **Fast comparison:** Compare two interned strings by comparing the reference



# Immutable strings

- Strings are reference types, and **immutable**
- Strings behave as if they are value types. They are assigned and compared by value
- Strings are thread-safe
- Strings are fast
- Strings conserve memory