

Data Abstraction

FOCS, Fall 2020

Abstraction

"Taking away details from something to reduce it to a set of essential characteristics"

Functional abstraction:

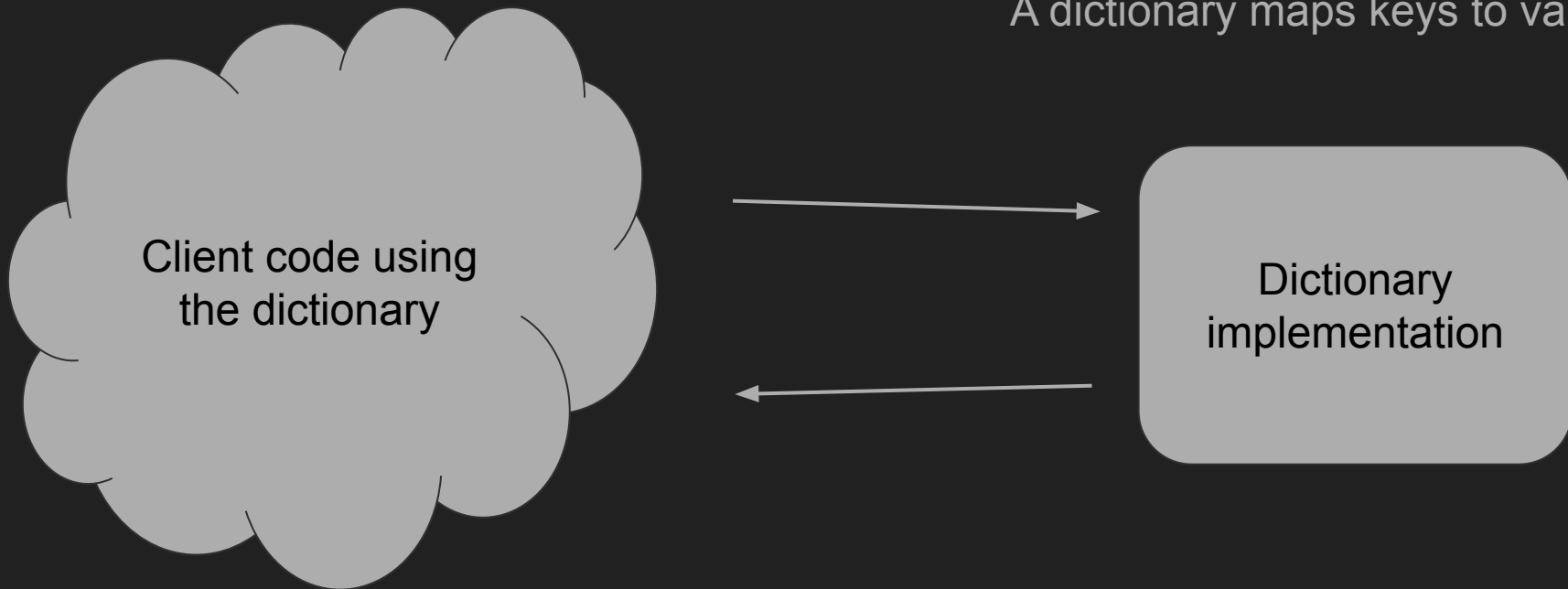
- remove details of an piece of code so that it is more general
- create an artifact (a function) that makes it easier to reuse the piece of code

Data abstraction:

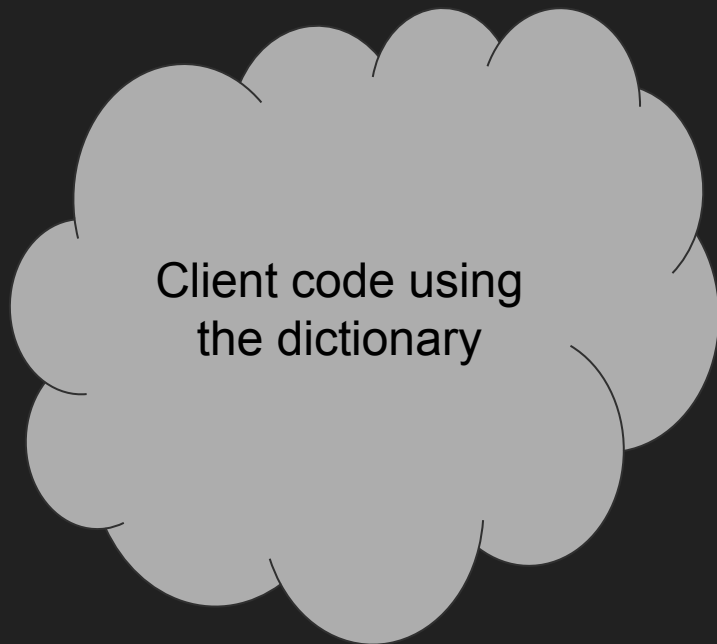
- remove details from data so that it is independent of its representation

Example: dictionary

A dictionary maps keys to values



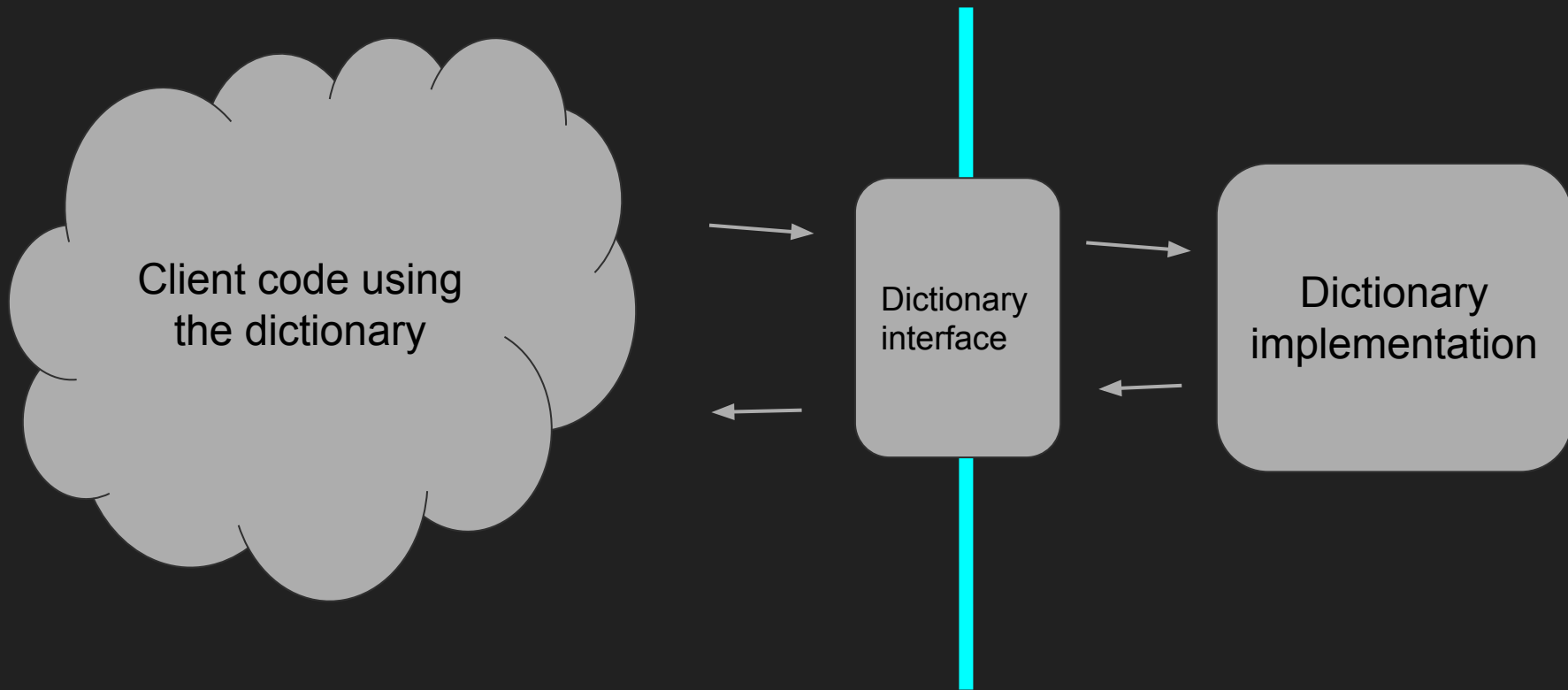
Example: dictionary



A dictionary maps keys to values

If you expose the representation of
dictionaries, client code will use it

Example: dictionary



Example: dictionary

