

Abstract Data Types (ADT)

Implementations

List

→ ArrayList, LinkedList

Stack

Queue

→ Binary Search Tree

Dictionary

Dictionary ordered K V
grouping of keys with values

Operations

void insert (K key, V value)

associate key with value (fails if key is already present)

V get (K key)

retrieves value associated w/ a key (fails if key is not present)

void remove (K key)

remove the value associated w/ a key

bool contains (K key)

void update (K key, V value)

change value for a key

English Dictionary	Key = word Value = defn of word
Student Records	Key = username Value = student record
Weather Data	Key = town Value = highest temperature

Dictionary $d = \dots;$

$d \rightarrow \text{insert}("A", 5)$

yields $5 \rightarrow d \rightarrow \text{get}("A")$

$d \rightarrow \text{insert}("B", 6)$