

इतना मत गिरो कि उठने का यक़ीन टूट जाए,
इतना उठो कि गिरने वाला भी सोच में पड़ जाए।



Standard Template Library

STL is a collection of pre-built classes and functions

Components of STL



Containers

Hold and organize the data.



Algorithms

Perform actions like sorting or searching on the data.



Iterators

Helps go through the data in containers one by one.

Container

Containers are the data structures used to store objects and data according to the requirement.

Containers can be further classified into 4 types:

1. Sequence Containers : Vector, Deque, List
2. Associative Containers : Set, MultiSet, Map, Multimap
3. Unordered Associated Containers : Unordered set, unordered Map,



Algorithms

STL algorithms offer a wide range of functions to perform common operations on dat

Sort()

reverse()

min_element()

max_element()

count()

ACCUMULATE()

#include <iostream>

#include <bits/stdc++.h>

#include <string.h>

#include <stdio.h>

#

#include <math.h>

#include <stdlib.h>

vector

header: `#include <vector>`

Syntax:

`vector < dataType > v`

`vector < dataType > v (size)`

`vector < int > v (5)`

capacity = 5

size() = 3



* `v.push_back(data)`

(10)

(20)

(30)

(40)

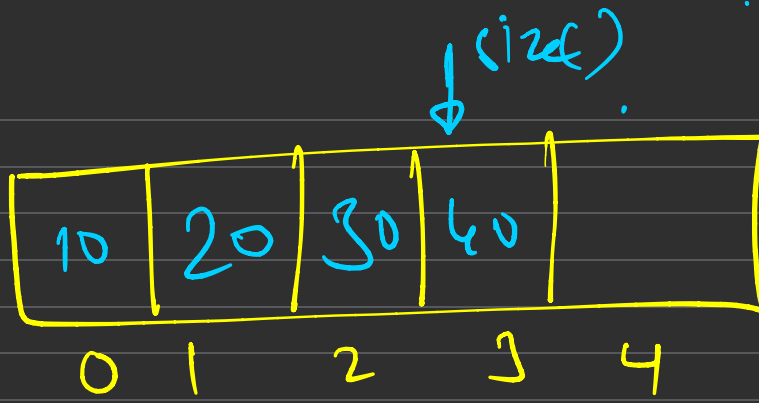
[10]

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* `v.pop_back()` → Remove last element

* `v.size()` → size of vector

* `v.empty()` $\begin{cases} T & \text{if empty} \\ F & \end{cases}$



size = 0
2

pop_back

vector<int> v(5)

v.push_back(10)
(20)

v(size) = 2
size++

Pairs

Multiset

Unordered Set

Map

Unordered Map

reverse()

count()

accumulate()

`min_element()`

max_element()