

इतना मत गिरो कि उठने का यकीन 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()`

#include <iostream>

#include <bits/stdc++.h>

#include <string.h>

#include <stdio.h>

#  
#include <math.h>  
#include <stdlib.h>

# vector

header: #include <vector>

Syntax:

vector < data type > v

vector < data type > v( size )

vector < int > v( 5 )

capacity = 5

size() = 3



\* `v.push_back(data)`

(10)

(20)

(30)

(40)

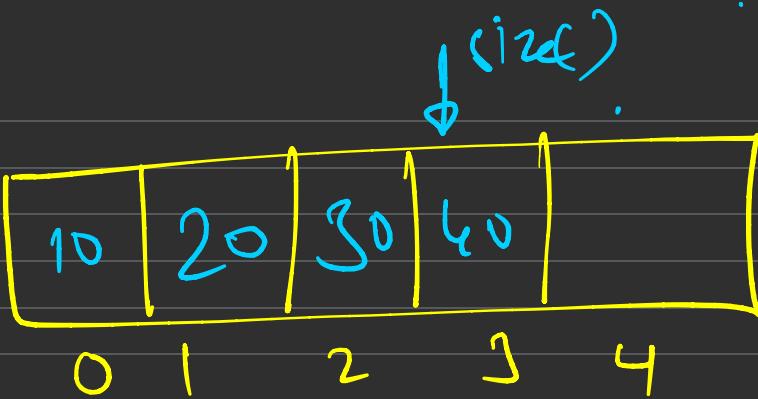
10

[10 | 20 ] [ 30 ]

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

\* `v.size()` → size of vector

\* `v.empty()` { T if empty  
F }



~~size = 0~~

2

pop-back

vector <int> v (5)

v.push-back(11)  
(20)

v (size) = 11

size++

Pairs



# Multiset

## Unordered Set

Map

## Unordered Map

Sort()

reverse()

count()

**accumulate()**

`min_element()`

max\_element()