**C++ STL**

**Vector**

#include<bits/stdc++.h>

using namespace std;

int main() {

// Create an empty vector

vector<int> myVector;

// Add elements to the vector using push\_back()

myVector.push\_back(10);

myVector.push\_back(20);

myVector.push\_back(30);

// Accessing elements using indexing

cout << "First element: " << myVector[0] << endl;

// Accessing elements using iterator

cout << "Elements: ";

for (vector<int>::iterator it = myVector.begin(); it != myVector.end(); ++it) {

cout << \*it << " ";

}

cout << endl;

// Size and capacity

cout << "Size: " << myVector.size() << endl;

cout << "Capacity: " << myVector.capacity() << endl;

// Modifying elements

myVector[1] = 50;

// Inserting elements at a specific position

vector<int>::iterator insertPos = myVector.begin() + 2;

myVector.insert(insertPos, 40);

// Erasing elements

vector<int>::iterator erasePos = myVector.begin() + 1;

myVector.erase(erasePos);

// Clearing the vector

myVector.clear();

// Checking if the vector is empty

if (myVector.empty()) {

cout << "Vector is empty" << endl;

} else {

cout << "Vector is not empty" <<endl;

}

return 0;

}

Learning::

https://youtu.be/j8nAHeVKL08

https://youtube.com/playlist?list=PLdo5W4Nhv31YU5Wx1dopka58teWP9aCee

https://youtube.com/playlist?list=PLdo5W4Nhv31bbKJzrsKfMpo\_grxuLl8LU

https://youtube.com/playlist?list=PLoa\_roVVsxA2Rqa21grJ4jovQW3kFc3SE

https://www.programiz.com/cpp-programming

Problem Solving::

beecrowd.com.br(Practice)

hackerrank.com/dashboard(C++ Practice)

codechef.com(Practice+Contest)

atcoder.jp(Contest)

<https://www.hackerearth.com/challenges/> (Practice)

[https://lightoj.com/home (Practice](https://lightoj.com/home%20(Practice) for icpc)

codeforces.com(Main Website for Compititive Programming)(Practice+Contest)