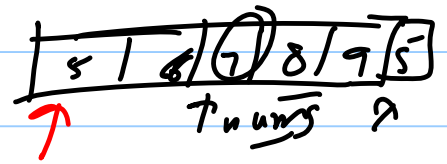


Last (Pass. Grids / Vectors).



STL :-

vector<type> vec;

1. vec.push_back(value);

→ example:-

nums.push_back(5);

2. vec.erase(vec.begin() + index);



SPL

Vector<type> vec;

1. vec.add(value);

nums.add(5);

2. vec.remove(index);

nums.remove(2);

STL

SPL

5	4	8	5
↑	↑	↑	↑
1	7	10	15

3. `vec.insert(vec.begin() + index, value);`
`nums.insert(nums.begin() + 3, 10);`

`vec.insert(index, value)`
`nums.insert(3, 10);`

4. `vec.at(index);`
`nums.at(1);`
 $\rightarrow \underline{6}$

4. `vec.at(index);`
`vec.get(index)`
`nums.get(1);`
 $\rightarrow 6$

for (int i=0; i < nums.size(); i++)
 cout << `nums.at(i);`
 3 `nums[i];`

for (int i=0; i < nums.size(); i++)
 cout << `nums.get(i);`
 3 `nums[i];`

Streams

→ #include <iostream> operator

↓ Standard C++

input → abc def 123 456

#include <sstream>

#include <iostream>

stringstream input("abc def 123 456");

string first, last, phone;

input >> first; input >> last;

stringstream

stringstream

tokenize the stream using whitespaces.

cout << output stream
cin >> n;
↳ input stream

ifstream
ofstream
⇒ standard I/O
⇒ file I/O
⇒

This is cool. The class
is fun to teach. Do you agree?

~~ifstream~~ ifstream input2; } → input filestream
input2.open("file.txt");

~~ifstream~~ ifstream input2("abc def 123 456 hello world");
string word; ↑ ↑

~~while~~
while (input2 >> word) {
 cout << word << endl;
}

abc
def
123
456
hello
world

#include <sstream>

output streams (stringstream)

int age = 42;

int iq = 95;

↓ output

your age is 42 & your IQ is 95

stringstream output;

output << "your age is" << age << endl;

→ cout << "your age is" << age;

→ output << " & your IQ is" << iq << endl;

→ string s = output.str(); // returns the

cout << s;

1st string corresponding

// to output stream

4/your age is 42 & your iq is 95

```
cout << "What is your name?";
```

```
string name;
```

```
cin >> age;
```

```
getline(cin, name);
```

```
{ cin >> name;  
  cout << name;
```

```
// manoj divedi
```

```
{ getline(cin, name);
```

↑
stream

↑
string

```
name = getline(" — ");
```

stanford for

C++
~~test~~
function

→ Problem:- can't use getline & >> in conjunction

if not allowed } will lead to err. unexpected behavior.