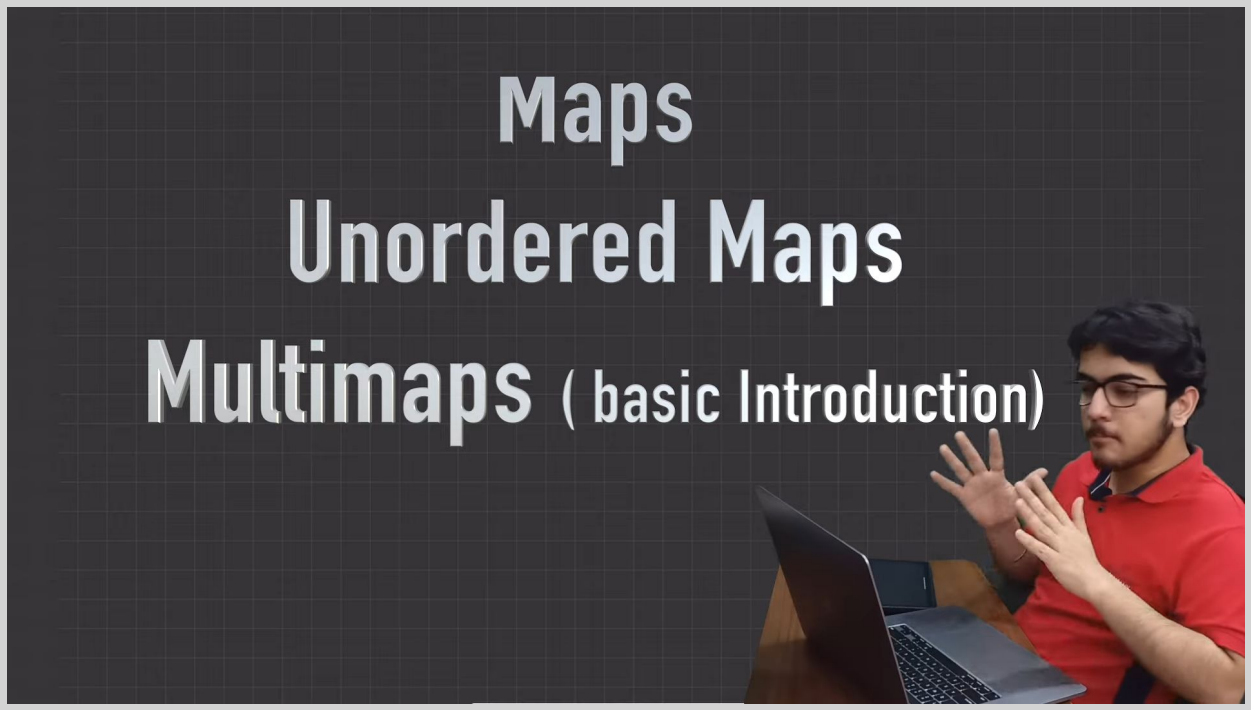
←

Map Lecture 25

00:36

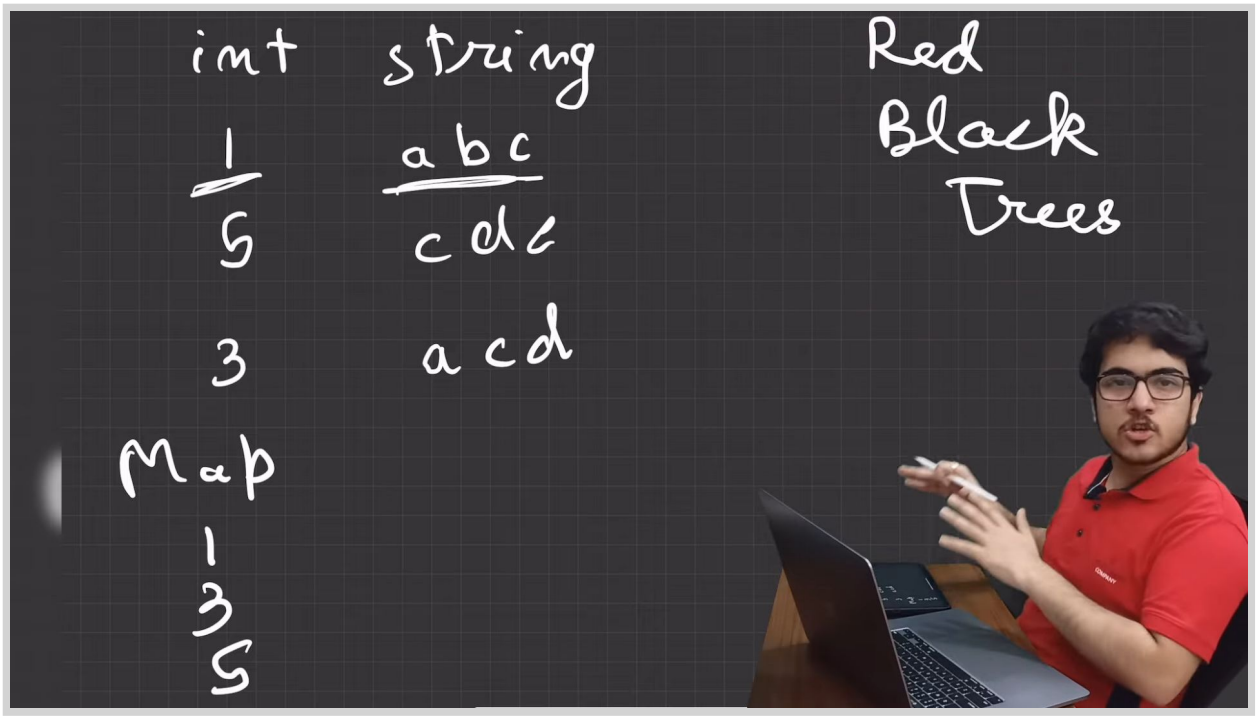


Practice Questions:

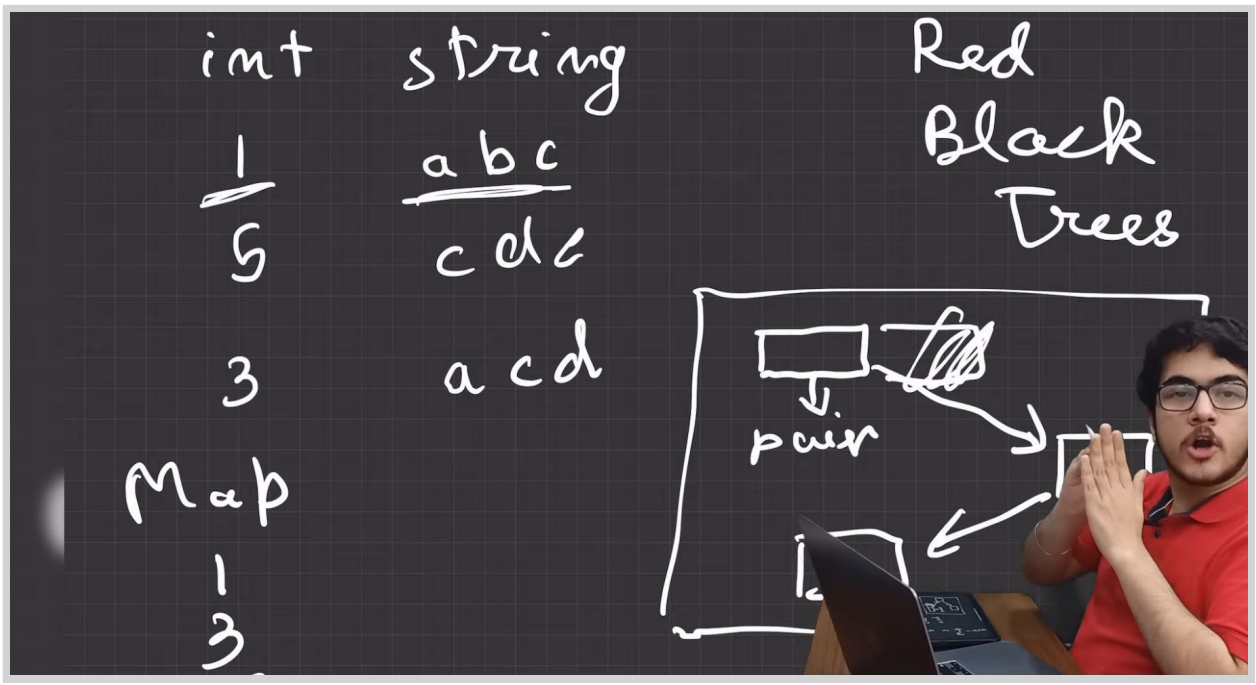
Note: Its hard to find practice questions particularly for STL as they are generally used with other concepts involved hence not providing a lot of them in STL videos. Below are some questions for practice:

1. https://practice.geeksforgeeks.org/problems/twice-counter4236/1
2. https://codeforces.com/problemset/problem/525/A
3. https://codeforces.com/problemset/problem/4/C
4. https://www.hackerrank.com/challenges/cpp-maps/problem
5. https://www.geeksforgeeks.org/tag/cpp-map/

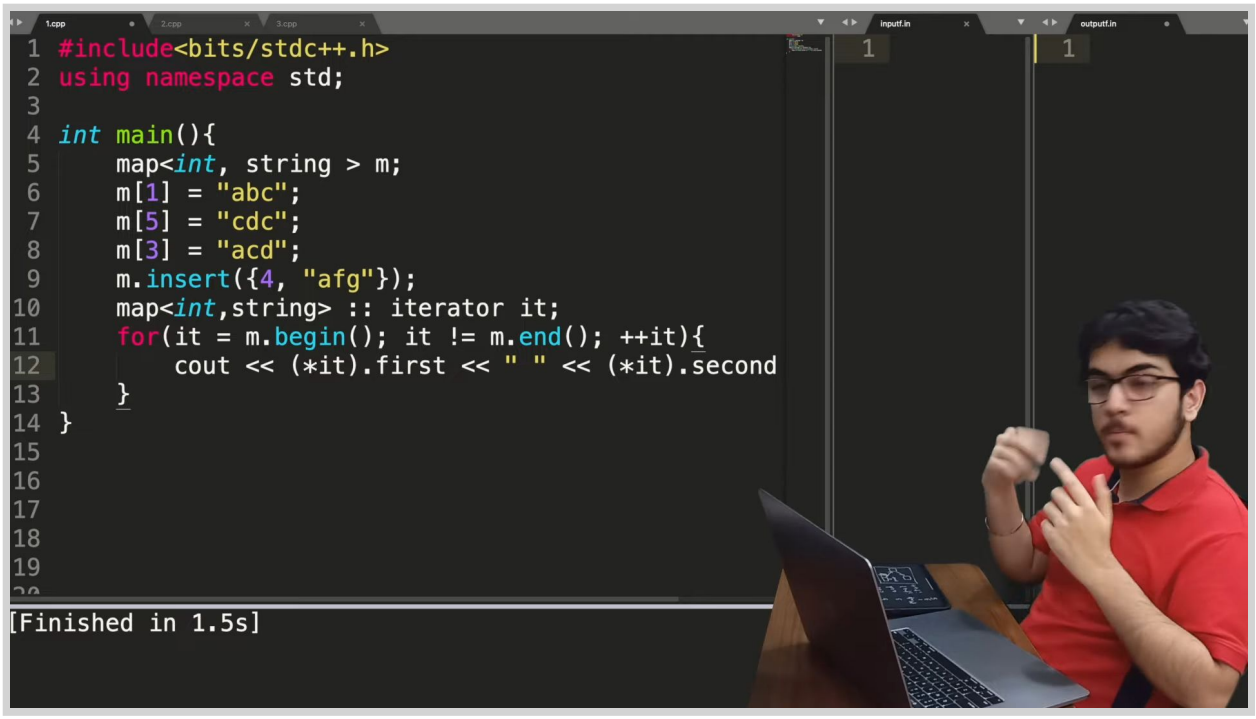
02:41


int
string
1
5
abc
cdc
3
acd
Map
1
3
5
Red
Black
Trees

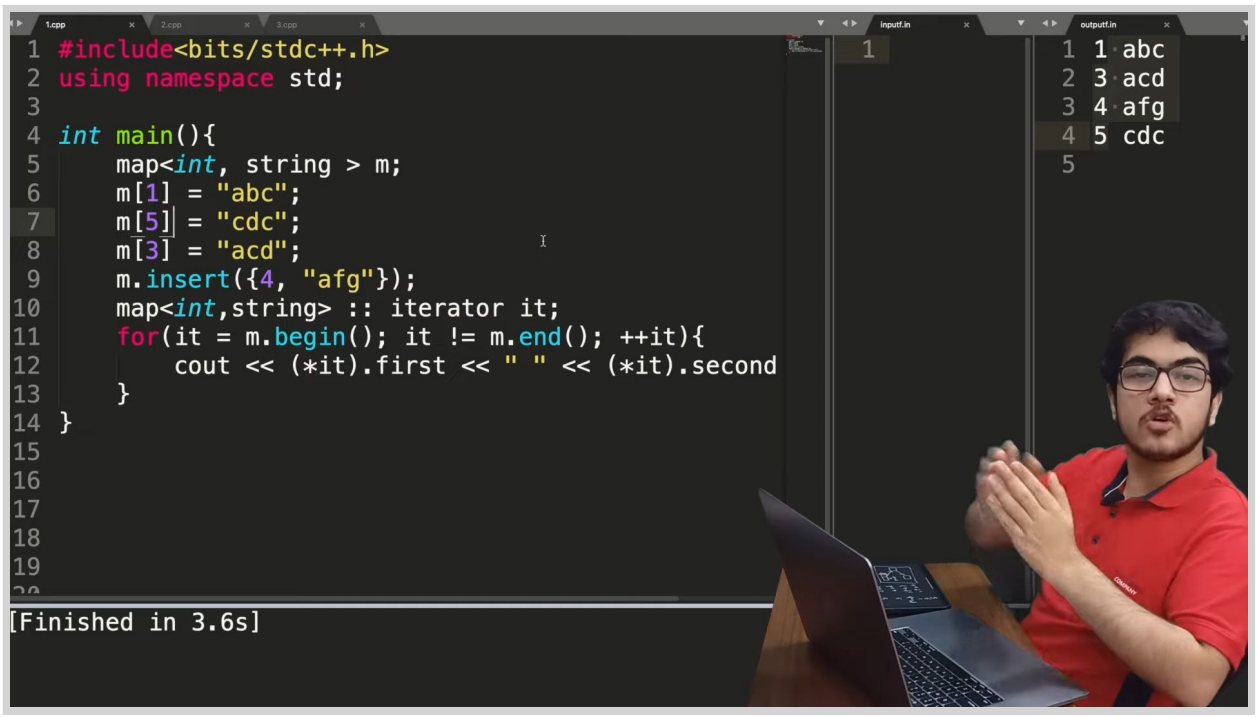
[03:24](#)


int
string
1
5
abc
cdc
3
acd
Map
1
3
Red
Black
Trees
pair

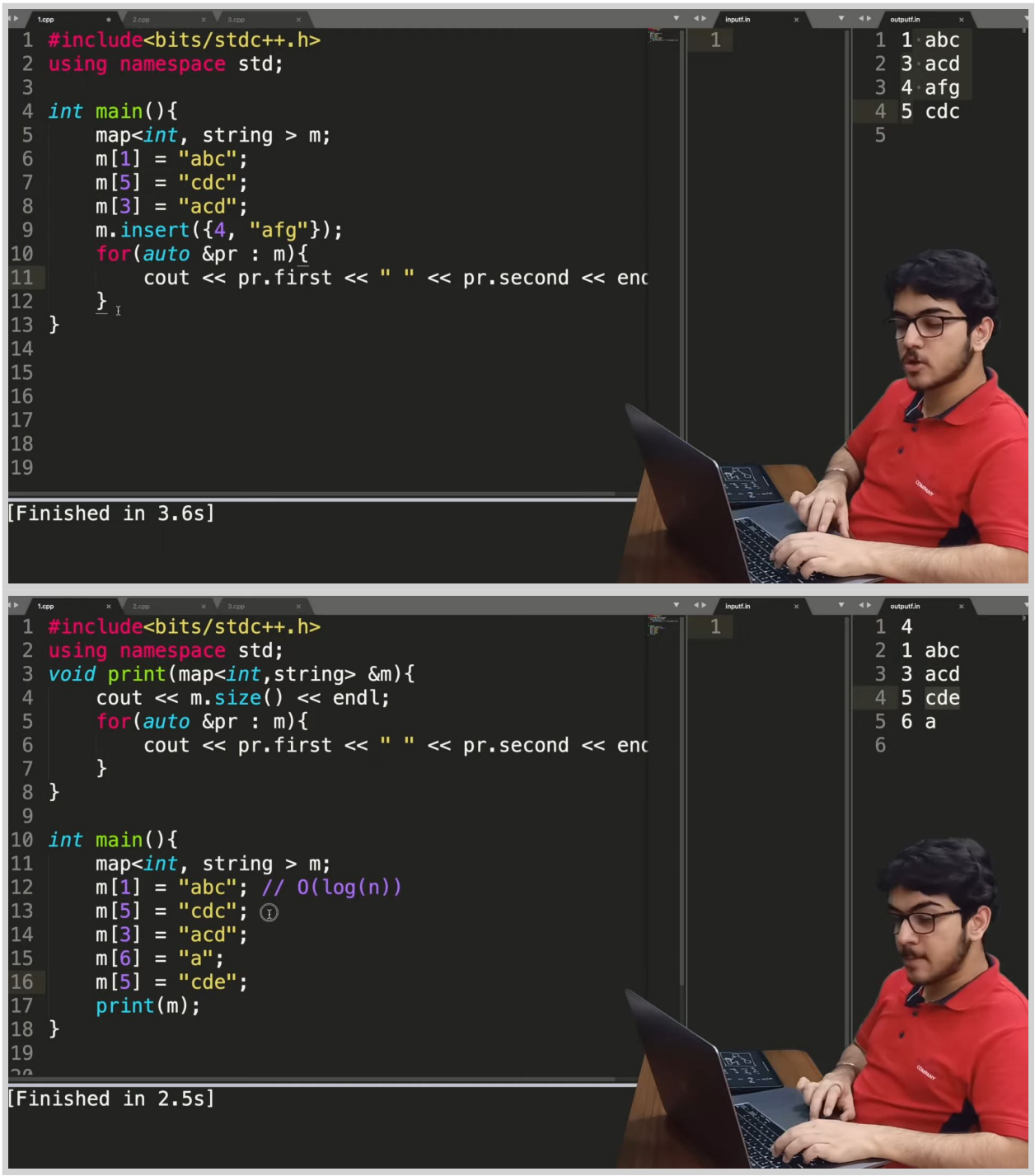
[06:26](#)


1.cpp
2.cpp
3.cpp
#include<bits/stdc++.h>
using namespace std;
int main(){
map<int, string > m;
m[1] = "abc";
m[5] = "cdc";
m[3] = "acd";
m.insert({4, "afg"});
map<int,string> :: iterator it;
for(it = m.begin(); it != m.end(); ++it){
cout << (*it).first << " " << (*it).second
}
}
inputf.in
1
outputf.in
1
[Finished in 1.5s]

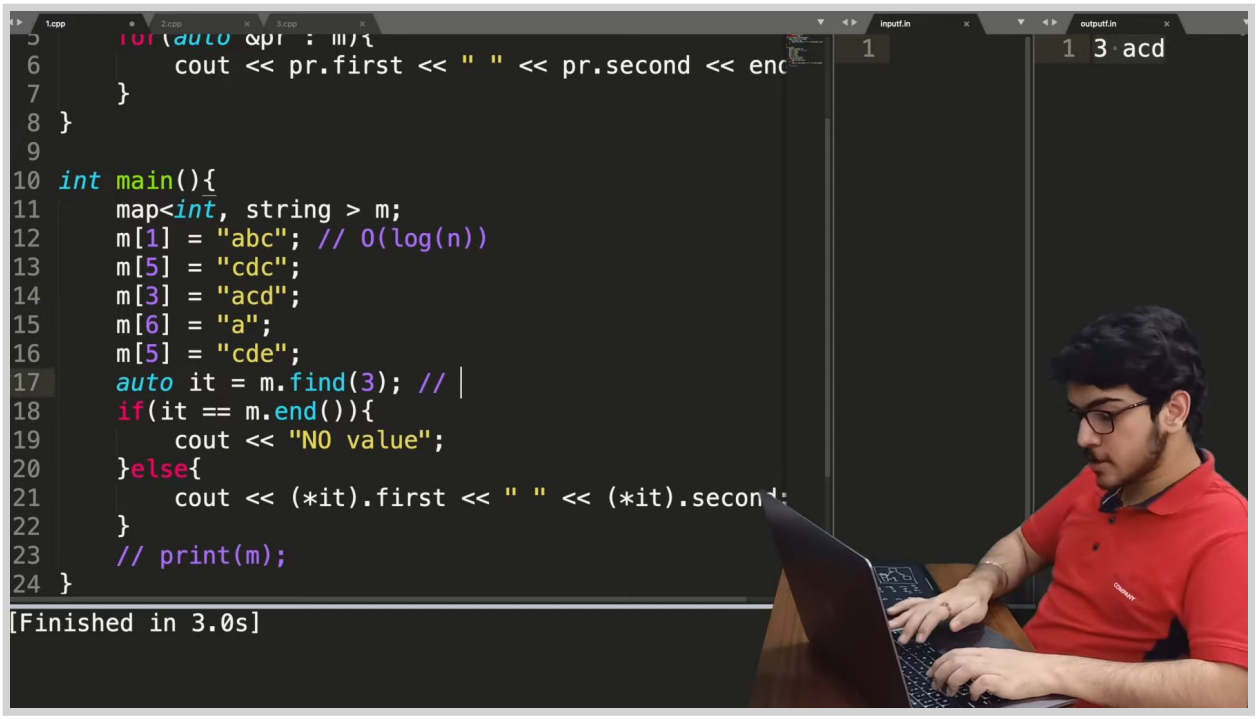
[06:55]


1.cpp
2.cpp
3.cpp
#include<bits/stdc++.h>
using namespace std;
int main(){
map<int, string > m;
m[1] = "abc";
m[5] = "cdc";
m[3] = "acd";
m.insert({4, "afg"});
map<int,string> :: iterator it;
for(it = m.begin(); it != m.end(); ++it){
cout << (*it).first << " " << (*it).second
}
}
inputf.in
1
outputf.in
1 abc
3 acd
4 afg
5 cdc
[Finished in 3.6s]

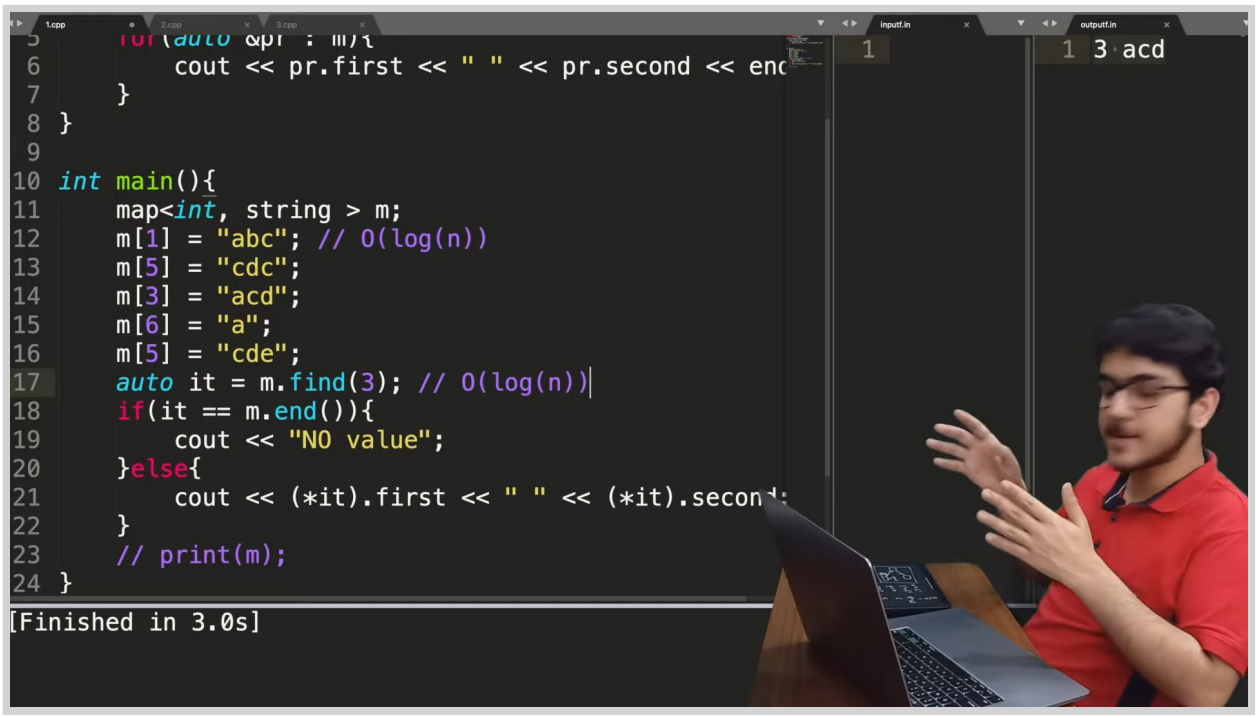
[07:52]


1.cpp
#include<bits/stdc++.h>
using namespace std;
int main(){
map<int, string > m;
m[1] = "abc";
m[5] = "cdc";
m[3] = "acd";
m.insert({4, "afg"});
for(auto &pr : m){
cout << pr.first << " " << pr.second << enc
}
}
inputf.in
1
outputf.in
1 abc
3 acd
4 afg
5 cdc
[Finished in 3.6s]
1.cpp
#include<bits/stdc++.h>
using namespace std;
void print(map<int,string> &m){
cout << m.size() << endl;
for(auto &pr : m){
cout << pr.first << " " << pr.second << enc
}
}
int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
print(m);
}
inputf.in
1
outputf.in
4
1 abc
3 acd
5 cde
6 a
[Finished in 2.5s]

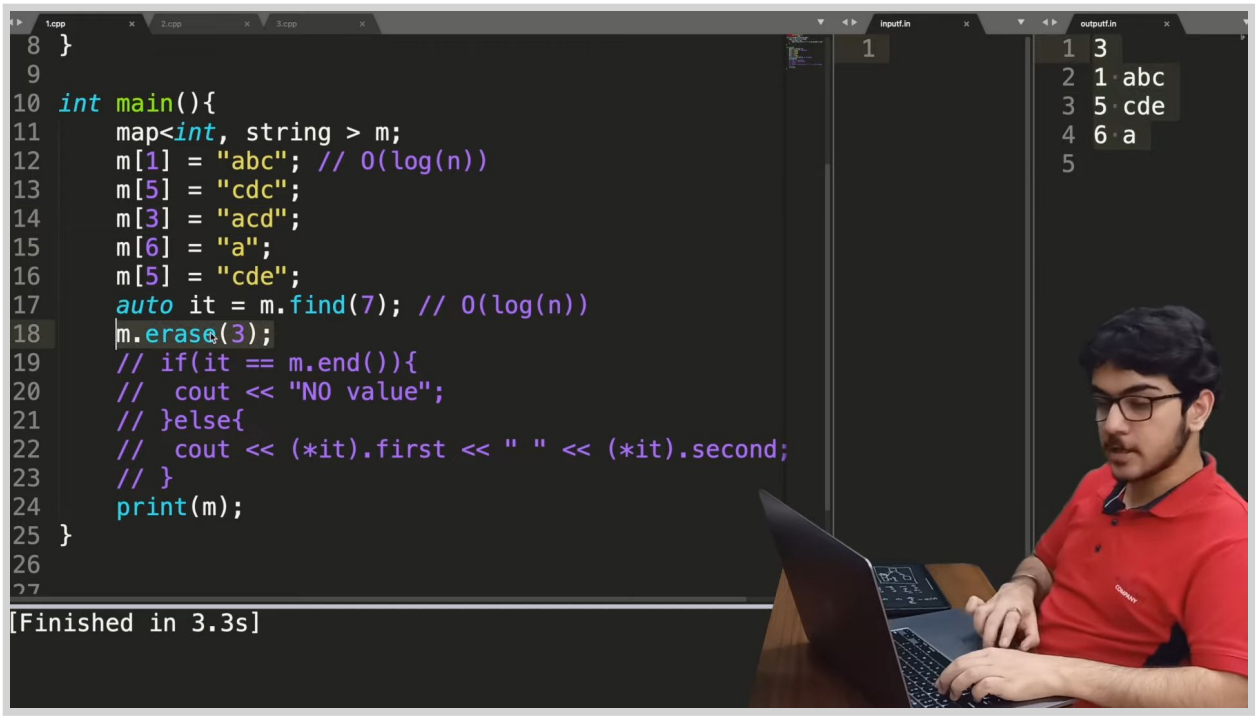
13:12

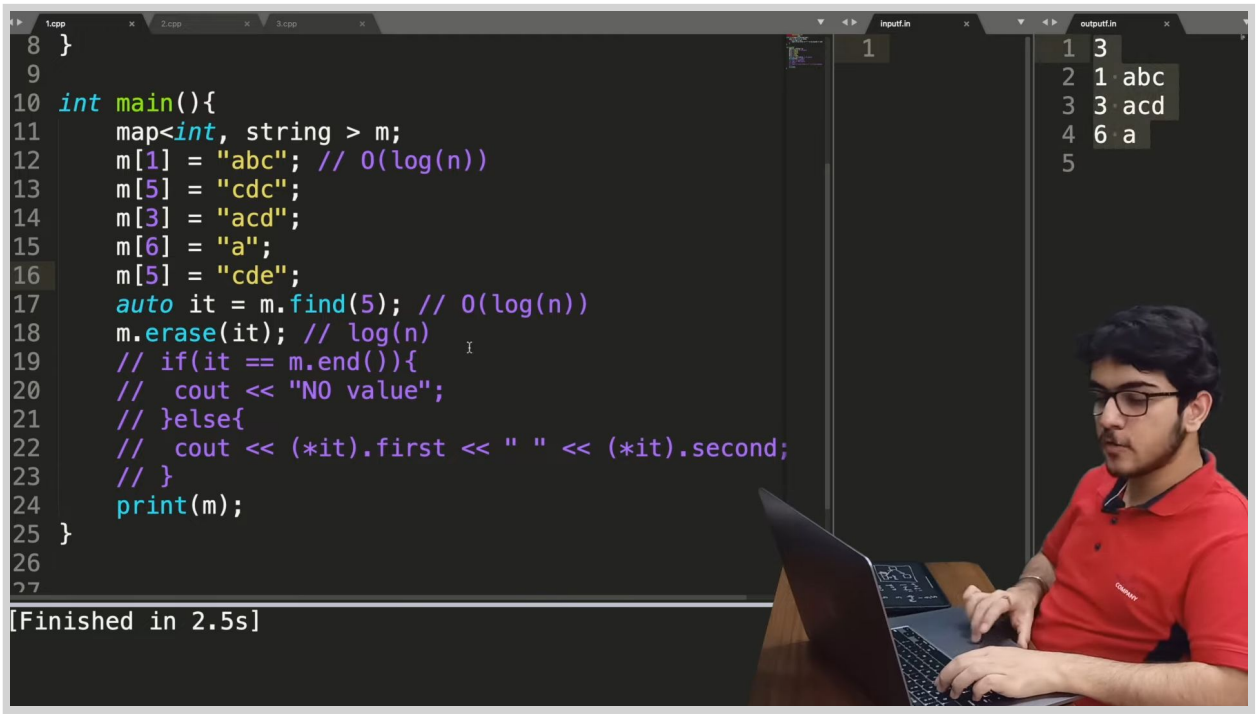

cout << pr.first << " " << pr.second << end
}
}
int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
auto it = m.find(3); //
if(it == m.end()){
cout << "NO value";
}else{
cout << (*it).first << " " << (*it).secon
}
// print(m);
}
[Finished in 3.0s]
1
1 3 acd

13:21

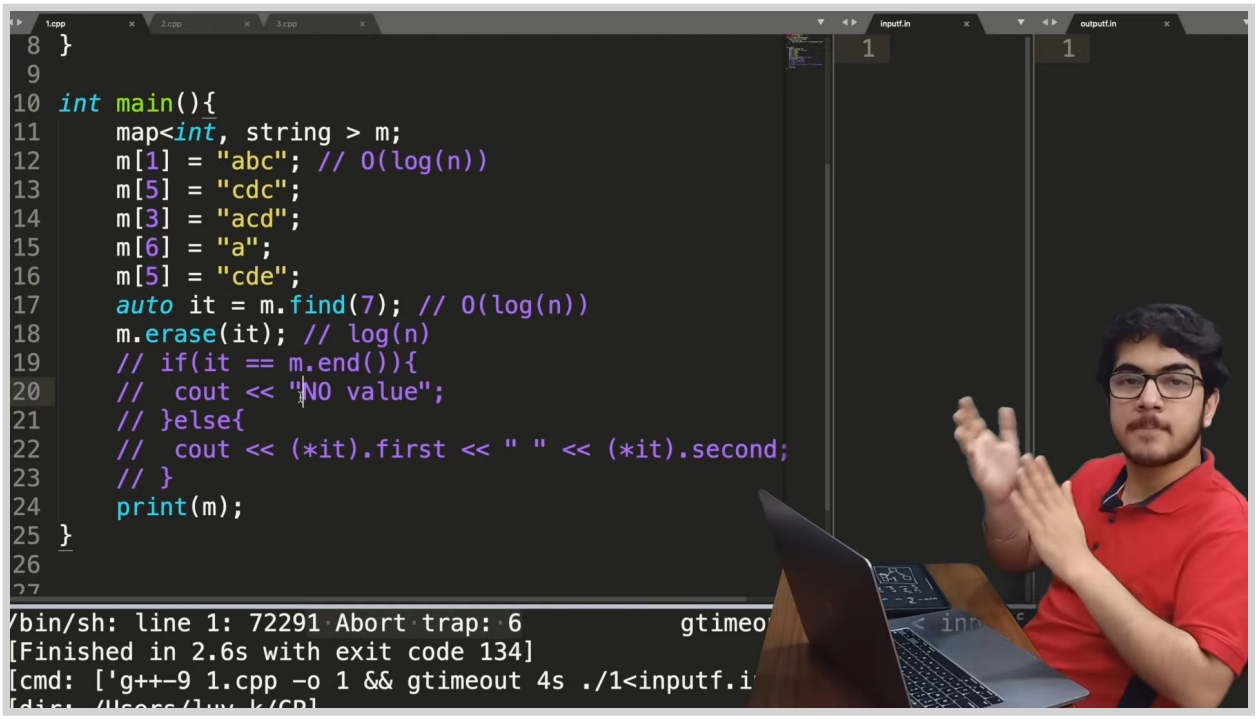

cout << pr.first << " " << pr.second << end
}
}
int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
auto it = m.find(3); // O(log(n))
if(it == m.end()){
cout << "NO value";
}else{
cout << (*it).first << " " << (*it).secon
}
// print(m);
}
[Finished in 3.0s]
1
1 3 acd

14:25

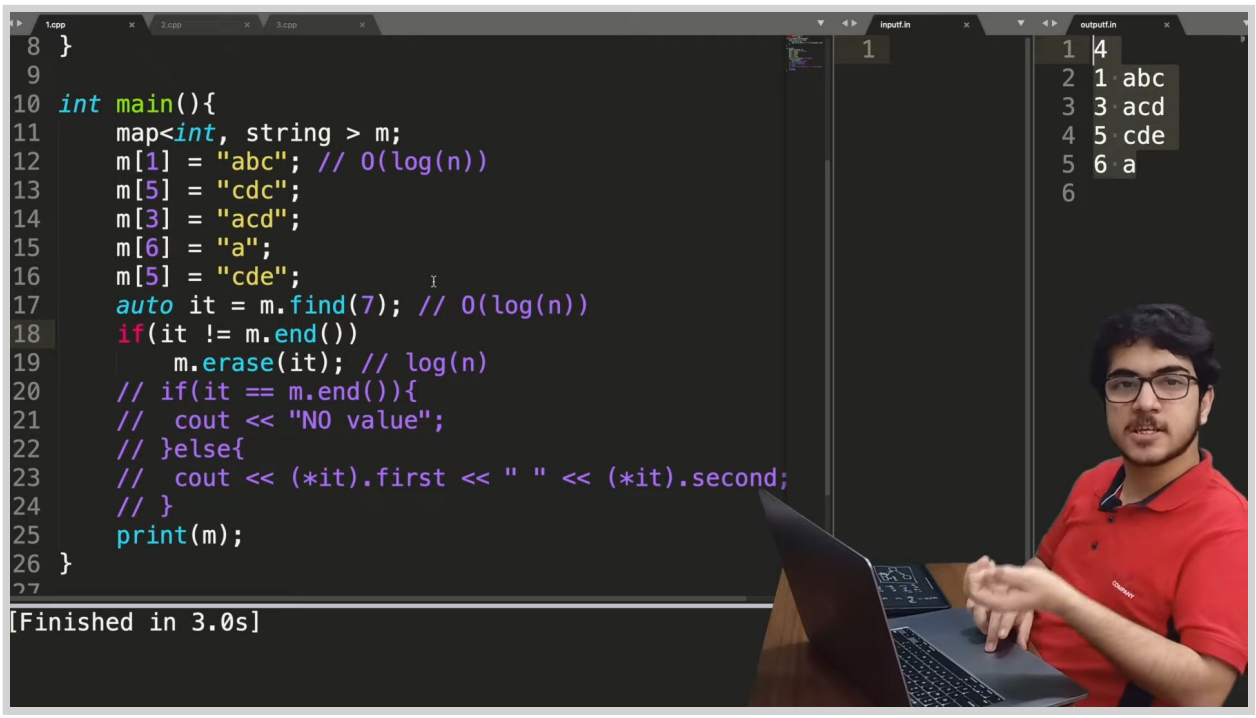

1.cpp
2.cpp
3.cpp
inputf.in
outputf.in
}
int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
auto it = m.find(7); // O(log(n))
m.erase(3);
// if(it == m.end()){
// cout << "NO value";
// }else{
// cout << (*it).first << " " << (*it).second;
// }
print(m);
}
1
3
1 abc
5 cde
6 a
[Finished in 3.3s]


1.cpp
2.cpp
3.cpp
inputf.in
outputf.in
}
int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
auto it = m.find(5); // O(log(n))
m.erase(it); // log(n)
// if(it == m.end()){
// cout << "NO value";
// }else{
// cout << (*it).first << " " << (*it).second;
// }
print(m);
}
1
3
1 abc
3 acd
6 a
[Finished in 2.5s]

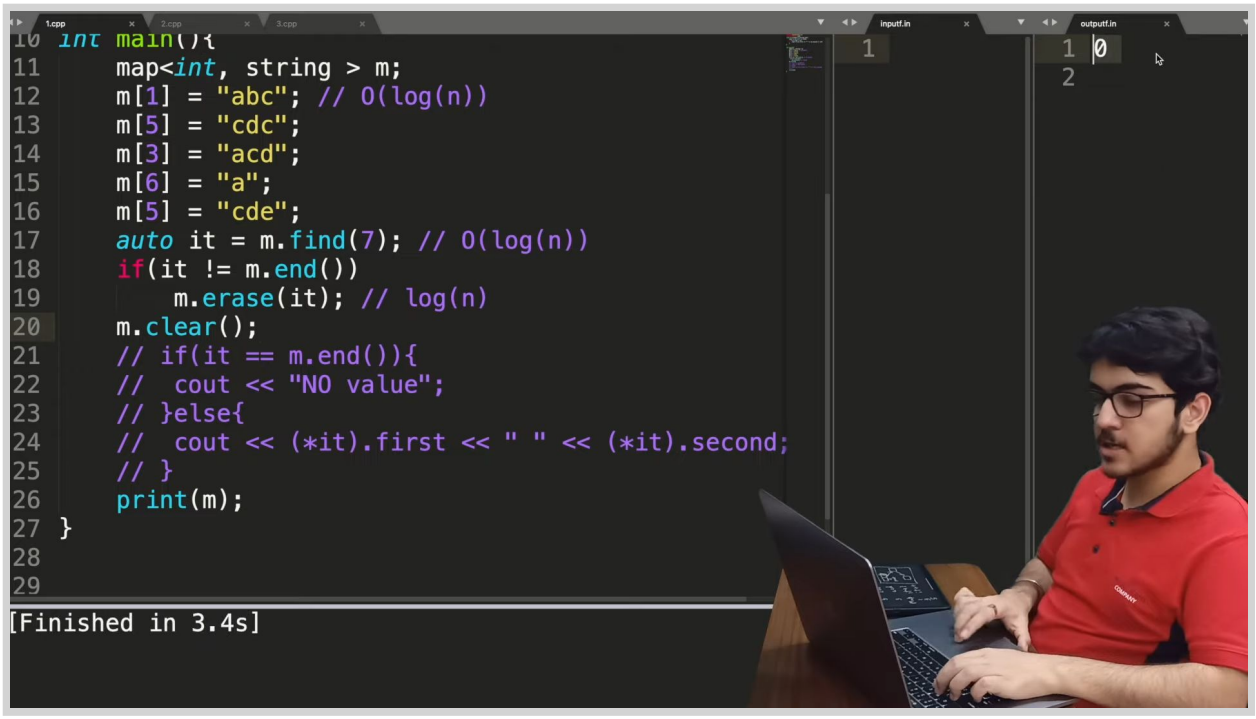
15:12


1.cpp
2.cpp
3.cpp
inputf.in
outputf.in
}
int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
auto it = m.find(7); // O(log(n))
m.erase(it); // log(n)
// if(it == m.end()){
// cout << "NO value";
// }else{
// cout << (*it).first << " " << (*it).second;
// }
print(m);
}
/bin/sh: line 1: 72291 Abort trap: 6 gtimeo
[Finished in 2.6s with exit code 134]
[cmd: ['g++-9 1.cpp -o 1 && gtimeout 4s ./1<inputf.i

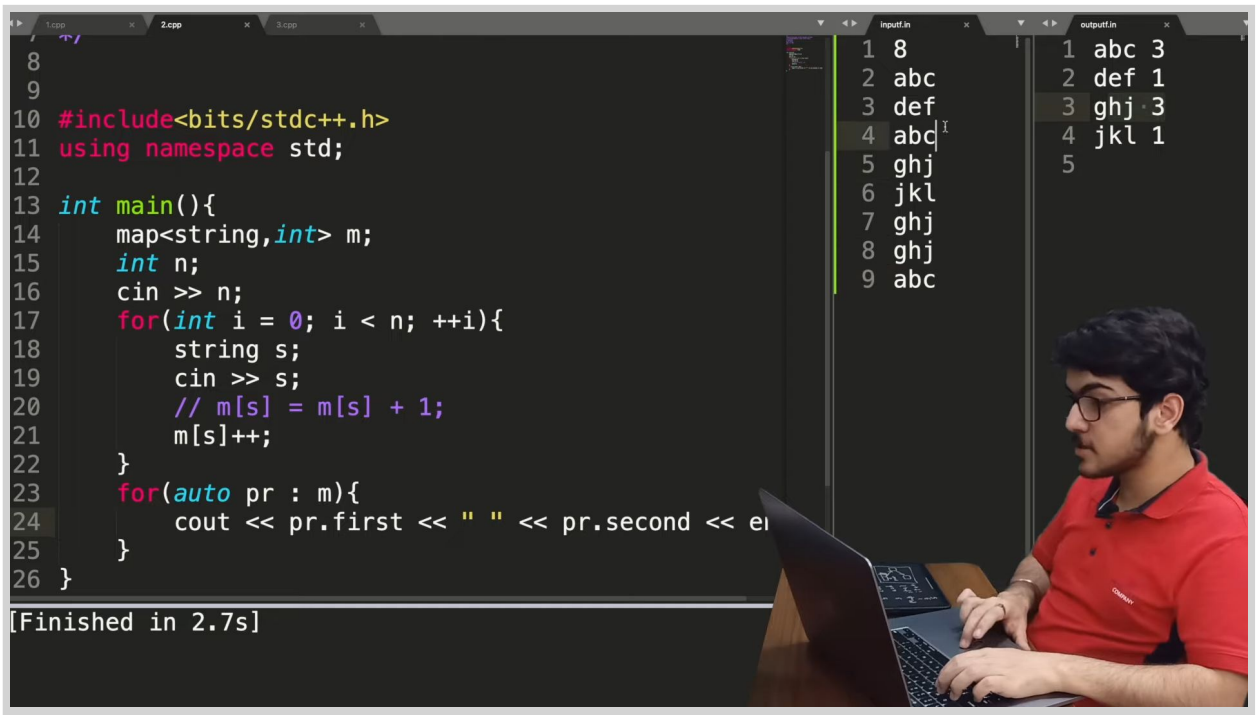
[15:45](#)


1.cpp
2.cpp
3.cpp
inputf.in
outputf.in
}
int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
auto it = m.find(7); // O(log(n))
if(it != m.end())
m.erase(it); // log(n)
// if(it == m.end()){
// cout << "NO value";
// }else{
// cout << (*it).first << " " << (*it).second;
// }
print(m);
}
4
1 abc
3 acd
5 cde
6 a
[Finished in 3.0s]

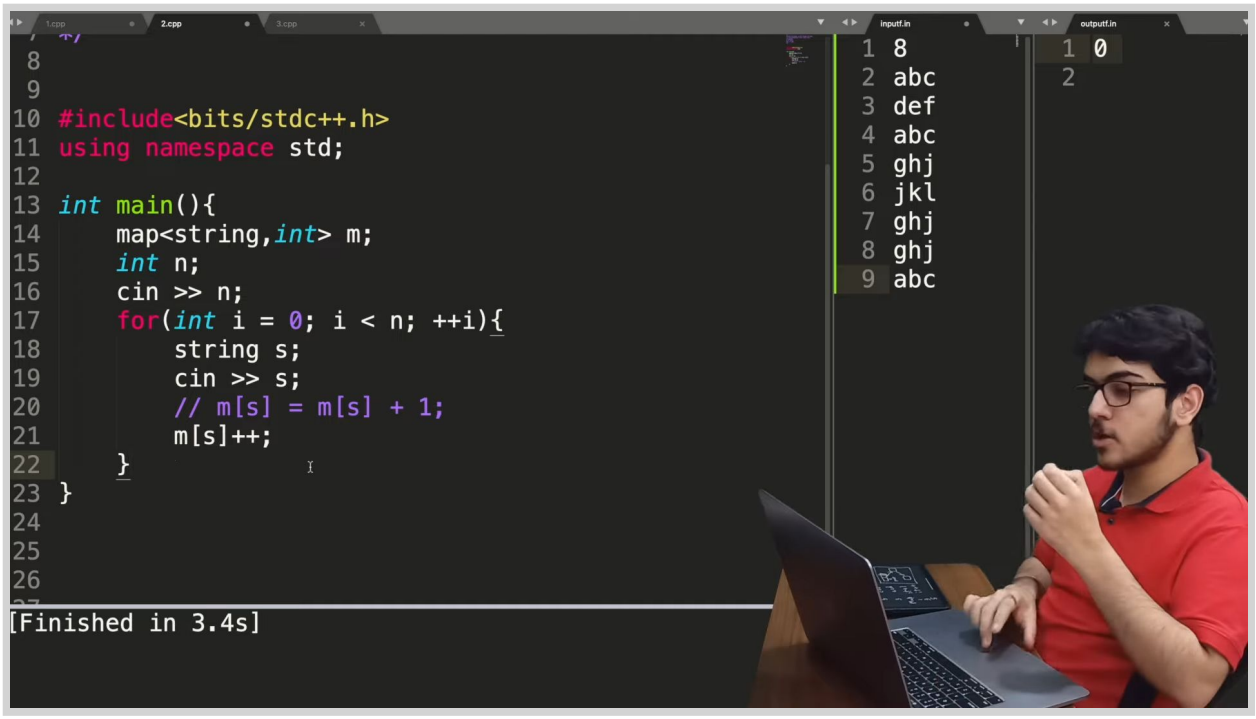
[16:39](#)


int main(){
map<int, string > m;
m[1] = "abc"; // O(log(n))
m[5] = "cdc";
m[3] = "acd";
m[6] = "a";
m[5] = "cde";
auto it = m.find(7); // O(log(n))
if(it != m.end())
m.erase(it); // log(n)
m.clear();
// if(it == m.end()){
// cout << "NO value";
// }else{
// cout << (*it).first << " " << (*it).second;
// }
print(m);
}
[Finished in 3.4s]

[22:00](#)


#include<bits/stdc++.h>
using namespace std;
int main(){
map<string,int> m;
int n;
cin >> n;
for(int i = 0; i < n; ++i){
string s;
cin >> s;
// m[s] = m[s] + 1;
m[s]++;
}
for(auto pr : m){
cout << pr.first << " " << pr.second
}
}
[Finished in 2.7s]
8
abc
def
abc
ghj
jkl
ghj
ghj
abc
abc 3
def 1
ghj 3
jkl 1

[21:39](#)


1.cpp
2.cpp
3.cpp
inputf.in
outputf.in
#include<bits/stdc++.h>
using namespace std;
int main(){
map<string,int> m;
int n;
cin >> n;
for(int i = 0; i < n; ++i){
string s;
cin >> s;
// m[s] = m[s] + 1;
m[s]++;
}
}
8
abc
def
abc
ghj
jkl
ghj
ghj
abc
0
[Finished in 3.4s]