advance → OOP concepts of C++

STL in C++

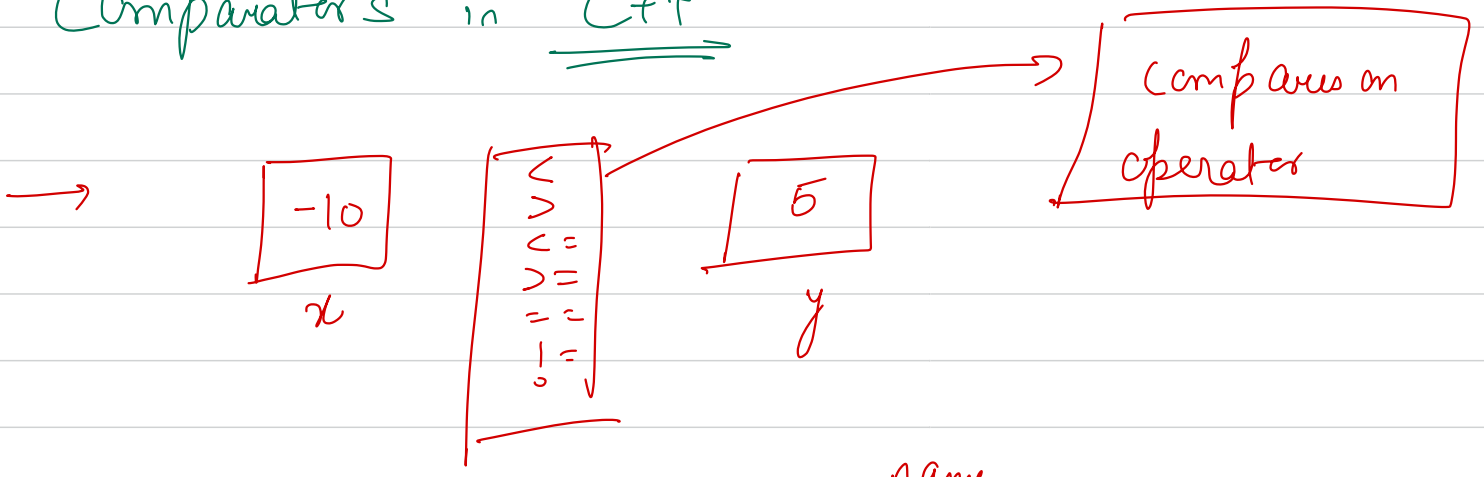
Standard template library

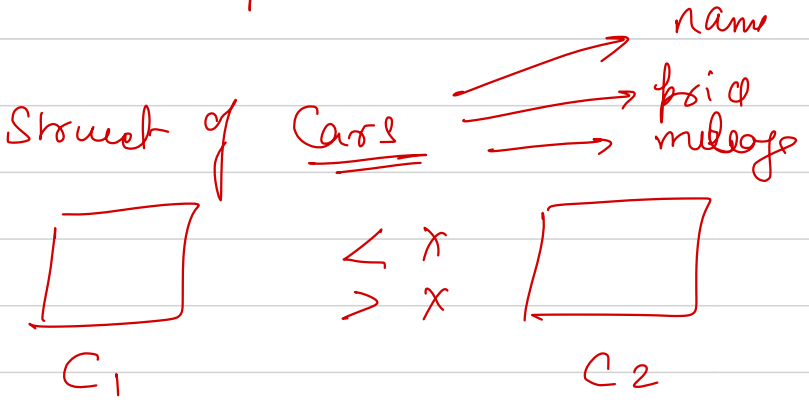
→ Generic programming

Comparator in function in C++

Containers & iterators in C++

(1) Comparators in C++





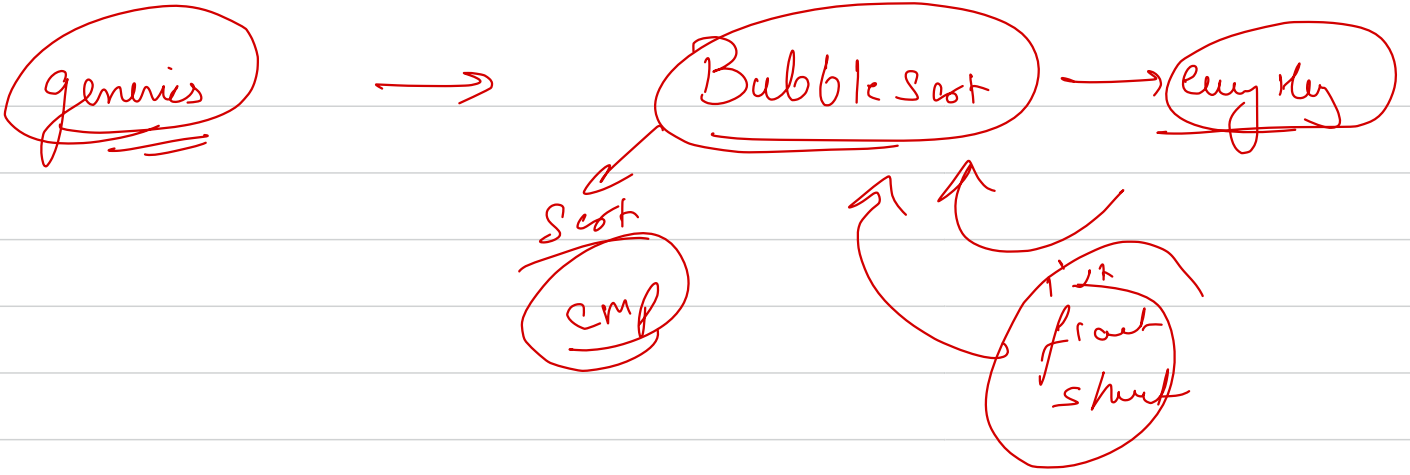
multiple Structs of cars, and you want to rearrange these cars based on price in ASC

code:-

#include <algorithm>

sort

[s, e)



Sort

Sort (arr , arr+n)

* instantiating a function template → when compiler sees a function call it resolves the type of object for which we need to call to generic function & then make a new version of the function by substituting type of object every where instead of T.

template function is an instance of function template

STL

library

Sort

Stacks, queue, heap, map, PBDS etc

Sort, lower_bound, upper_bound, next_permut

3 → Container
→ algorithm
→ iterators

arrays → size

generic

Container → It is a way to store data.

1 → sequence containers → these containers stores a set of elements in a line vise manner
→ vectors, deque, list

(2) associative Containers → these are not linear in structure: Generally they require a key to access data:

→ map, unordered_map, set, unordered_set, multiset, multimap

function of STL

sort( )

vector<int> v.

v.size

→ member func

iterators → are like pointers that are used to access individual data in containers

- → forward access
- → bidirectional
- → random access
- → output
- → input

vector<int> v;

v.begin();

vectors / map, set / pq / PBDS / deque, stack, bit

algo