

41 Lecture - CS304

Important Subjective

1. What is the Standard Template Library (STL) in C++?

Answer: The Standard Template Library is a library of generic algorithms, data structures, and iterators that are part of the C++ standard library.

What is an iterator in STL?

Answer: An iterator is a type of object that points to an element in a container in STL and allows us to access and modify its value.

What are the advantages of using STL in C++ programming?

Answer: The advantages of using STL in C++ programming are that it provides a set of reusable and interchangeable components, reduces development time, improves code quality, and makes the code more maintainable.

What is a container in STL?

Answer: A container is a class that stores and manages a collection of objects in STL, such as vectors, lists, sets, and maps.

What is the difference between a vector and a list in STL?

Answer: A vector is a sequence container that stores objects in contiguous memory, while a list is a doubly linked list container that stores objects in non-contiguous memory.

What is an algorithm in STL?

Answer: An algorithm is a set of operations that can be performed on a range of elements in a container in STL, such as sorting, searching, and copying.

What is a template in STL?

Answer: A template is a C++ feature that allows us to write generic code that works with different data types, and it is used extensively in STL to provide a generic framework for algorithms and containers.

What is the difference between a stack and a queue in STL?

Answer: A stack is a container that provides LIFO (last-in-first-out) access to elements, while a queue is a container that provides FIFO (first-in-first-out) access to elements.

What is the complexity of finding an element in a map in STL?

Answer: The complexity of finding an element in a map in STL is $O(\log n)$, where n is the number of elements in the map.

What is the difference between a set and a multiset in STL?

Answer: A set is a container that stores unique elements in sorted order, while a multiset is a container that stores multiple copies of the same element in sorted order.