STL Container Adapters
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- There are three types of container adapters in STL

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<td>stack</td>
<td>Last in, first out (LIFO) data structure.</td>
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<td>queue</td>
<td>First in, first out (FIFO) data structure.</td>
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<td>priority_queue</td>
<td>Queue that maintains items in a sorted order based on a priority value.</td>
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STL Container Adapters

- There are three types of container adapters in STL
  - The **stack** container adapter
    - Ideal when one needs to use a “Last In, First Out” (LIFO) data structure where elements are inserted & removed from the same end
STL Container Adapters

- There are three types of container adapters in STL
  - The stack container adapter
  - The queue container adapter
    - A “First In, First Out” (FIFO) data structure where elements are inserted into one end & removed from the other end
STL Container Adapters

- There are three types of container adapters in STL
  - The stack container adapter
  - The queue container adapter
  - The priority_queue adapter
    - Assigns a priority to every element that it stores
      - New elements are added to the queue using the `push()` function, just as with a queue
      - However, its `pop()` function gets element with the highest priority
STL Container Adapter Examples

template<typename T, typename Container = deque<T>>
class stack {
public:
    explicit stack(const Container& c): container_(c) {}
    ...
    bool empty() const { return container_.empty(); }
    size_type size() const { return container_.size(); }
    value_type& top() { return container_.back(); }
    const value_type& top() const { return container_.back(); }
    void push(const value_type& t) { container_.push_back(t); }
    void pop() { container_.pop_back(); }
private:
    Container container_;  
//...
};

See github.com/douglascraigschmidt/CPlusPlus/tree/master/STL/S-07