CS 162
Intro to CS II
Standard Template Library & Begin Lists
Odds and Ends

• Assignment #4 Discussion
• Fun Friday – Engineering Expo/No class
  – ECE: Pick 2 ECE Senior Design Project and Interview
    • What was the project?
    • Did the project include writing software?
    • What did the software do?
    • What language did they use? Why?
  – CS: Pick 2 CS Senior Design Project and Interview
    • What was the project?
    • Did the project include a design of the application first?
    • What did the application do?
    • What language did they use? Why?
Standard Template Library

• What have we used so far?
  – vector

• Container classes
  – vector
  – list

• What else is useful?
  – vector<T>::iterator
  – list<T>::iterator
Kinds of Iterators

• Forward
• Bidirectional
• Random-access
• Constant vs. Mutable
• Sentinel (not iterator) vs. Non-sentinel
  – begin() vs. end()
```cpp
#include <iostream>
#include <vector>
#include "./vector.hpp"

using std::cout;
using std::endl;

int main()
{
    std::vector<int> v(2); // make a vector to hold 2 ints
    vector<char> my_v; // making my own vector
    std::vector<int>::iterator it; // create iterator object for vector
    std::vector<int>::reverse_iterator itr; // create reverse iterator object

    v[0]=1;
    v[1]=2;
    cout << v.size() << endl;
    v.push_back(3); // push the number 3 to the back of list
    cout << v.size() << endl;

    for(it = v.begin(); it!=v.end(); it++)
        cout << *it << endl;
    for(itr = v.rbegin(); itr!=vrend(); itr++)
        cout << *itr << endl; // print in reverse using reverse iterator
}
```