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

• Assignment #4 Discussion

• Fun Friday – Engineering Expo
  – 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\textless T\textgreater ::iterator
  – list\textless T\textgreater ::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!=v.rend(); itr++)
        cout << *itr << endl; //print in reverse using reverse iterator
}```