

resizing vectors

Using the *apvector* class you can change the size of the vector during run time. In fact, one way to use a vector in your program is to declare the vector with no size, then resize it during execution to the size you need.

One way to achieve this is to ask the user the number of locations needed. For example:

```
int main ()
{
    apvector<int> a;
    int size;

    cout << "How many numbers will you enter? ";
    cin >> size;
    a.resize(size);
}
```

Sometimes you have a situation where input size cannot be determined ahead of time. In this case make the vector some reasonable size to start with, then when the vector becomes full, DOUBLE the size of the vector. DO NOT resize the vector by one each time a new item needs to be added! The resize function is an expensive function, that is, it takes a long time to execute. For example:

```
int main()
{
    apvector<int> a(5);
    int num;
    int ctr = 0;

    cout << "Enter a number (-999 to stop): ";
    cin >> num;
    while (num != -999)
    {
        if (ctr >= a.length())
            a.resize(a.length()*2);
        a[ctr] = num;
        ctr++;
        cout << "Enter a number (-999 to stop): ";
        cin >> num;
    }
    a.resize(ctr);
}
```