

CSI 201

for loops!

1. Goals for today: practicing vectors, characters and characters as integers
2. Remember vectors! Here's a big example of everything from last class using integers

```
#include <vector>
#include <string> //not used in this example
#include <iostream>
using namespace std;
int main() {
    vector<int> grades; //makes the list of integers
    for(int i = 0; i < 10; ++i) {
        int next_grade;
        cin >> next_grade;
        grades.push_back(next_grade); //puts a new one at end of list
    }
    cout << "There are " << grades.size() << " grades. " << endl;
    cout << "The first grade is: " << grades.at(0) << endl;

    cout << "Here's all the grades: " << endl;
    for(unsigned i = 0; i < grades.size(); ++i) {
        cout << grades.at(i) << endl;
    }
}
```

3. Create a vector for names. Allow a user to input more names until the user types exit. Then output all the names the user entered.

4. Create a vector of integers and read in some from the user. (10 will work fine). Then output all the integers except, cast them as characters first. You can do that in two ways. Either by putting (char) in front of the variable or by making a char for the integer as shown below. Does the output match what you would expect?

```
//option 1 with an implicit type cast
int integer_variable = 87;
char my_character = integer_variable;
cout << my_character << endl; //outputs R
//option 2 with an explicit type cast
int my_var = 65;
char my_char = (char)my_var;
cout << my_char << endl; //outputs A
```

5. Given your list of names from the first exercise, write a loop to output every third name.

6. Take the code from the previous exercise and output every group of three names added together. Just use + to add the strings together. Example: If the user inputs: **how is the castle going today exit**. Your first bit of code will make a list with 6 words **how is the castle going today**. The code from the last exercise will output **how castle**. This code segment should output **howisthe castlegoingtoday** You can use addition to concatenate strings in this one. Basically addition with strings means take one string and put the other string at the end of it.