Operator Overloading Exercises

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1.1–1.2

Get the Example Code

Exercise starter code:
https://github.com/sandraleeusc/csci104_fall2020_lecture

Str class mimics the C++ string class, str.h and str.cpp

- Properly handle memory allocation
- Practice treating string like an array using '[i]' indexing
- Practice comparison on string objects with '==' and other operators, etc.
- You may use old C string libraries <cstring> to help you
- To get the address stored in a unique_ptr, use the get() function

- **For today's lecture you only need to submit completed str.h and str.cpp for the weekly written exercises**

Extra Exercises: grocerylist.cpp

1. Write an '==' operator for Grocery List
2. Write [] operator for Grocery List. Make sure to include const and non-const versions. (Why?)
3. Write Copy Constructor for Grocery List (example in Str, more discussion next time)
4. Write + operator for Grocery List

```
// for main inside grocerylist.cpp
//once you have written appropriate
//functions, you can change main to this

int main() {
  GroceryList list1, list2;
  list1.addItem("apples");
  list1.addItem("bananas");
  list1.addItem("peaches");
  list1.printList();
  list2.addItem("onions");
  list2.addItem("peppers");
  list2.addItem("broccoli");
  GroceryList list3 = list1;
  cout << boolalpha << (list1 == list3) << endl;
 GroceryList list4 = list1 + list2;
  list4.printList();
  cout << list4[3] << endl;
  list4[3] = "oatmeal";
  list4.printList();
}
```