# 3460:209-010 Fall 2011 Lab 3 Report

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Note:  First column is revision number when that line was last changed.

------------ ig11/Labs/Lab3/string.cpp ------------
```
/*
Lab 3: make your own string class string.cpp
Author: Istvan Gates
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Purpose: make my own string class with constructor and deconstructor

*/
#include <iostream>
#include "string.hpp"
```

------------ ig11/Labs/Lab3/CMakeLists.txt ------------
```
project(Lab3 CXX)
cmake_minimum_required(VERSION 2.8.11)

set(CMAKE_CXX_FLAGS "-std=c++11")

add_executable(lab3
        string.cpp
        main.cpp)
```

------------ ig11/Labs/Lab3/string.hpp ------------
```
/*
Lab 3: Make your own string class   string.hpp
Author: Istvan Gates
        ig11@zips.uakron.edu

Purpose: make my own string class with constructor and deconstructor
*/
#ifndef STRING_HPP
#define STRING_HPP
#include <string.h>

using namespace std;

//create the STring class
class String{
        int len;
        char* str;

        public:
//default constructor for String
        String()
        :len(0), str(nullptr)
        {}

//copy constructor for String. copies the length of existing char array, dynamically
 allocates memory for the new string
        String(String const& s)
        :len(s.len), str(new char[len+1])
        {
                strcpy(str, s.str);
        }

//c-string constructor. copies length and contents, then dynamically allocates memo
ry for new c string array

        String(char const* s)
        :len(strlen(s)), str(new char[len + 1])
```

```
        {
                strcpy(str, s);
        }

//deconstructor to free up dynamically allocated memory
        ~ String(){
        delete[] str;
        }
};

#endif
```

------------ ig11/Labs/Lab3/main.cpp ------------
```
/*
Lab 3: Make Your Own String Class main.cpp
Author: Istvan Gates
        ig11@zips.uakron.edu

Purpose: make my own string class with constructor and deconstructor
*/
#include "string.hpp"

int main(){
        String s1;
        String s2 = "test";
        String s3 = s2;


}
```
--------------------------------------------------------------------
--------------------------------------------------------------------