

Computer Science Department

***CSC 2201: Computer Science II – Lab***

***Lab1***

**Description:**

You will implement your own String type, the Text class.

**Goals:**

Learn how to use C++ classes to implement an abstract data type (ADT).

**Where to Start:**

1. Download Lab1\_Work.zip from Blackboard
2. Unzip the file
3. Open the solution in Microsoft Visual Studio
4. Start Implementing the operations of the Text class (only the body of methods)

4.1. Implement default constructor: Text::Text ( const char \*charSeq ){…}

4.2. Implement copy constructor: Text::Text ( const Text &other ){…}

4.3. Implement operator =: void Text::operator = ( const Text &other ){…}

4.4. Implement destructor: Text::~Text (){…}

4.5. Implement getLength(): int Text::getLength () const {…}

4.6. Implement operator []: char Text::operator [] ( int n ) const {…}

4.7. Implement clear(): void Text::clear () {…}

4.8. Implement showStructure():void Text::showStructure () const {…}

1. Compile your implementation of the Text ADT in the file Text.cpp and the test program in the file test1.cpp.
2. Test your implementation using the program in the file test1.cpp.
3. Implement more methods:

7.1. Implement toUpper(): Text Text::toUpper( ) const {…}

7.2. Implement toLower(): Text Text::toLower( ) const {…}

1. Activate test 1 in the program test1.cpp by changing the definition of LAB\_TEST1 from 0 to 1 in config.h and recompiling.
2. Implement more operators:

9.1. Implement operator ==: bool Text::operator == ( const Text& other ) const {…}

9.2. Implement operator <: bool Text::operator < ( const Text& other ) const {…}

9.3. Implement operator >: bool Text::operator > ( const Text& other ) const {…}

1. Activate test 2 in the program test1.cpp by changing the definition of LAB\_TEST2 from 0 to 1 in config.h and recompiling.

**Create a Zip file of your solution:**

1. Right click on your solution in Solution Explorer
2. Click on “Open Folder in File Explorer”
3. Go one level up in file explorer
4. Right click on your solution folder
5. Add it to archive by creating a zip file

**Upload the zipped file on Blackboard:**

1. Go to Blackboard
2. Click on this course (CSC 2201: Computer Science II Lab)
3. Go to the folder “Labs”
4. Click on the “Lab1\_Work” assignment
5. Upload your zipped file