

Chapter 10 Programming Project (80 points)

Read Chapter 10 in your book if you have not done so yet.

(IMPLEMENT THE STRING CLASS) The String class is provided in the Java library. Provide your own implementation for the following methods (name the new class MyStringAlt):

- `public MyStringC(char[] chars);`
- `public char charAt(int index);`
- `public int length();`
- `public MyStringC substring(int begin, int end);`
- `public MyStringC toLowerCase();`
- `public boolean equals(MyStringC s);`
- `public static MyStringC valueOf(int i);`

Write a test program that shows that all methods work.

You should be using methods as needed and not using global variables.

In addition, in a separate file, provide your own implementation for the following methods (name the new class MyStringNew):

- `public MyStringS(String s);`
- `public int compare(String s);`
- `public MyStringS substring(int begin);`
- `public MyStringS toUpperCase();`
- `public char[] toChars();`
- `public static MyStringS valueOf(boolean b);`

Write a test program that shows that all methods work.

Submit your **Java** files to D2L (if you used a separate file to for your class, make sure to submit those files also).

You will be graded on the following criteria:

- Complete comment block at beginning
- Comments throughout code
- Code compiles and runs (failure to compile and compile will be a automatic 50% deduction)
- Code works and produces desired output
- Variables are named by the standards previously provided
- Only concepts from chapters 1 through 10 of your book are used (using other concepts may result in up to a 50% penalty).