In Lab 03 Operator Overloading Due: Thursday April 30.

Modify your String class by including operator overloading. Just a suggestion, write all of the functions even if you already have them. You need the practice and it’s liable to show up on a test. Also add exception handling and make your class const compliant.

**Stipulations**

1. The String class must have the following methods:
   1. Constructors
      1. String();
      2. String(char);
      3. String(const char \*);
   2. Copy Constructor
   3. Move Constructor
   4. Overloaded copy assignment operator
   5. Overloaded move assignment operator
   6. Comparison operators(<, >, <=, >=, ==, !=)
   7. Overloaded << operator
   8. Overloaded operators
      1. +, += (concatenation)
      2. ++ (both forms string uppercase)
      3. -- (both forms string lowercase)
      4. [ ] (returns the character at that element. Throw an error if a user tries to access an element that is out of bounds)
   9. GetLength method
   10. GetStr (returns a const char \*)
2. The String class will have the following data members
   1. char \* m\_str;
   2. int m\_length;
3. Write the driver/stub file that thoroughly tests all aspects of this class