

Laboratory 1: Cover Sheet

Name _____ Date _____

Section _____

Place a check mark in the *Assigned* column next to the exercises your instructor has assigned to you. Attach this cover sheet to the front of the packet of materials you submit following the laboratory.

Activities	Assigned: Check or list exercise numbers	Completed
Implementation Testing	✓	
Programming Exercise 1		
Programming Exercise 2		
Programming Exercise 3		
Analysis Exercise 1		
Analysis Exercise 2		
	Total	

Laboratory 1: Implementation Testing

Name _____ Date _____

Section _____

Check with your instructor whether you are to complete this exercise prior to your lab period or during lab.

Test your implementation of the Text ADT using the program in the file *test1.cpp*. This program supports the following tests.

Lab 1 Online Test Plans	
Test	Action
1-1	Tests the constructors.
1-2	Tests the length operation.
1-3	Tests the subscript operation.
1-4	Tests the assignment and clear operations.

Test Plan 1-1 (constructors)			
Test case	String	Expected result	Checked
Simple string	alpha	alpha	
Longer string	epsilon		
Single-character string	a		
Empty string	<i>empty</i>		

Test Plan 1-2 (length operation)			
Test case	String	Expected length	Checked
Simple string	alpha	5	
Longer string	epsilon		
Single-character string	a		
Empty string	<i>empty</i>		

Test Plan 1-3 (subscript operation)			
Test case	<i>n</i>	Expected character	Checked
Middle character	2	p	
First character	0		
Last character	4		
Out of range	10		

Test Plan 1-4 (assignment and clear operations)			
Test case	Assignment statement	Expected result	Checked
Simple assignment	<code>assignStr = alpha;</code>	alpha	
Single-character string	<code>assignStr = a;</code>		
Empty string	<code>assignStr = empty;</code>		
Source string longer than destination buffer	<code>assignStr = epsilon;</code>		
Assign to self	<code>assignStr = assignStr;</code>		
Check assignment by clearing destination	<code>assignStr = alpha;</code> <code>assignStr.clear();</code>		

Laboratory 1: Programming Exercise 1

Name _____ Date _____

Section _____

Test Plan 1-5 (lexical analysis program)		
Test case	Expected result	Checked
Program in the file <i>progsamp.dat</i>		

Laboratory 1: Programming Exercise 3

Name _____ Date _____

Section _____

Test Plan 1-7 (relational operations)			
Test case	Pair of strings	Expected result	Checked
Second string greater	alpha epsilon		
First string greater	epsilon alpha		
Identical strings	alpha alpha		
First string embedded in second	alp alpha		
Second string embedded in first	alpha alp		
First string is a single character	a alpha		
Second string is a single character	alpha a		
First string is empty	<i>empty</i> alpha		
Second string is empty	alpha <i>empty</i>		
Both strings are empty	<i>empty</i> <i>empty</i>		