System Test Plan: Compression program

Introduction: The text in bold in the **Description** column represents the test inputs.

Test Files: (List each test file below.)

HINT: The Unix diff command may be used to tell whether or not two files are identical. For example,
`diff test-files/computer.txt test-files/decompressedComputer.txt`

Test ID	Description	Expected Results	Actual Results

testTooFewArgs
 	
Author: Dr. Balik
	$ java -cp bin Compression	`Usage: java -cp bin Compression {-C|-D} infile outfile`
		
		`Program quits.`
			`Usage: java -cp bin Compression {-C|-D} infile outfile`
			
			`Program quits.`

testInvalidFlag
 	
Author: Dr. Balik
	$ java -cp bin Compression -X test-files/in.txt test-files/out.txt	`Usage: java -cp bin Compression {-C|-D} infile outfile`
		
		`Program quits.`
			`Usage: java -cp bin Compression {-C|-D} infile outfile`
			
			`Program quits.`

testMissingInputFile
 	
Author: Dr. Balik
	$ java -cp bin Compression -C test-files/notafile.txt test-files/out.txt	`Unable to access input file: test-files/notafile.txt`
		
		`Program quits.`
			`Unable to access input file: test-files/notafile.txt`
			
			`Program quits.`

testNoOverwrite
 	
Author: Dr. Balik
	Check timestamp for test-files/existingFile.txt
	
	$ **java -cp bin Compression -C test-files/input.txt test-files/existingFile.txt**
	test-files/existingFile.txt exists - OK to overwrite (y,n)?: **no**
		`Program quits.`
		
		`Timestamp for test-files/existingF ile.txt has not changed.`
			`Program quits.`
			
			`Timestamp for test-files/existingFile.txt has not changed.`

testOverwrite
 	
Author: Dr. Balik
	Check timestamp for test-files/existingFile.txt
	
	$ **java -cp bin Compression -C test-files/input.txt test-files/existingFile.txt**
	test-files/existingFile.txt exists - OK to overwrite (y,n)?: **yep**
		`Program quits.`
		
		`Timestamp for test-files/existingF ile.txt has changed.`
			`Program quits.`
			
			`Timestamp for test-files/existingFile.txt has changed.`

testCannotCreateOutputFile
 	
Author: Dr. Balik
	$ **java -cp bin Compression -C test-files/input.txt notadirectory/existingFile.txt**	`Cannot create output file`
		
		`Program quits.`
			`Cannot create output file`
			
			`Program quits.`

testCompressSingleWord Author: Dr. Balik	Delete test-files/compressedTest1.txt, if it exists $ **java -cp bin Compression -C test-files/test1.txt test-files/compressedTest1.txt**	compressedTest1.txt is created in the test-files directory. compressedTest1.txt is exactly the same as exp_compressedTest1.txt: `+t#@`	compressedTest1.txt is created in the test-files directory. compressedTest1.txt is exactly the same as exp_compressedTest1.txt: `+t#@`

| testDecompressSingleWord

Author: Dr. Balik | Delete test-files/decompressedTest1.txt, if it exists

$ **java -cp bin Compression -D test-files/exp_compressedTest1.txt test-files/decompressedTest1.txt** | decompressedTest1.txt is created in the test-files directory.

decompressedTest1.txt contains exactly the same characters as test1.txt:
`mentioning` | decompressedTest1.txt is created in the test-files directory.

decompressedTest1.txt contains exactly the same characters as test1.txt:
`mentioning` |
|---|---|---|---|
| testCompressSingleLineDifCharacterSeq

Author: Jayani Sivakumar | Delete test-files/compressedTest2.txt, if it exists

$ **java -cp bin Compression -C test-files/test2.txt test-files/compressedTest2.txt** | compressedTest2.txt is created in the test-files directory.

compressedTest2.txt is exactly the same as exp_compressedTest2.txt:
`today we tend to think of & computer as ~ electronic device but, as we` | compressedTest2.txt is created in the test-files directory.

compressedTest2.txt is exactly the same as exp_compressedTest2.txt:
`today we tend to think of & computer as ~ electronic device but, as we` |
| testDecompressSingleLineDifCharacterSeq

Author: Jayani Sivakumar | Delete test-files/decompressedTest2.txt, if it exists

$ **java -cp bin Compression -D test-files/exp_compressedTest2.txt test-files/decompressedTest2.txt** | decompressedTest2.txt is created in the test-files directory.

decompressedTest2.txt contains exactly the same characters as test2.txt:
`today we tend to think of the` | decompressedTest2.txt is created in the test-files directory.

decompressedTest2.txt contains exactly the same characters as test2.txt:
`today we tend to think of the computer as an electronic device but, as we` |

		computer as an electronic device but, as we	
testCompressSingleLine AllCharacterSeq Author: Jayani Sivakumar	Delete test-files/compressedTest3.txt, if it exists $ **java -cp bin Compression -C** **test-files/test3.txt** **test-files/compressedTest3.txt**	compressedTest3.txt is created in the test-files directory. compressedTest3.txt is exactly the same as exp_compressedTest3.txt: `& # @ % + $`	compressedTest3.txt is created in the test-files directory. compressedTest3.txt is exactly the same as exp_compressedTest3.txt: `& # @ % + $`

testDecompressSingleLi
neAllCharacterSeq
 	
Author: Jayani
Sivakumar
	Delete test-files/decompressedTest3.txt,
	if it exists
	
	$ **java -cp bin Compression -D**
	test-files/exp_compressedTest3.txt
	test-files/decompressedTest3.txt
		decompressedTest3.txt is
		created in the test-files
		directory.
		
		decompressedTest3.txt
		contains exactly the same
		characters as test3.txt:
		`the ion ing tis men`
		`re`
			decompressedTest3.txt is created in the
			test-files directory.
			
			decompressedTest3.txt contains exactly
			the same characters as test3.txt:
			`the ion ing tis men re`

testCompressFileWithM
oreThanOneLine
 	
Author: Jayani
Sivakumar
	Delete test-files/compressedTest4.txt, if
	it exists
	
	$ **java -cp bin Compression -C**
	test-files/test4.txt
	test-files/compressedTest4.txt
		compressedTest4.txt is
		created in the test-files
		directory.
		
		compressedTest4.txt is exactly
		the same as
		exp_compressedTest4.txt:
		`& line 1 is d~c@.`
			compressedTest4.txt is created in the
			test-files directory.
			
			compressedTest4.txt is exactly the same
			as exp_compressedTest4.txt:
			`& line 1 is d~c@.`
			`& line 2 is s@ing.`

		& line 2 is s@ing.	

testDecompressFileWithMoreThanOneLine
 	
Author: Jayani Sivakumar
	Delete test-files/decompressedTest4.txt, if it exists
	
	$ **java -cp bin Compression -D test-files/exp_compressedTest4.txt test-files/decompressedTest4.txt**
		decompressedTest4.txt is created in the test-files directory.
		
		decompressedTest4.txt contains exactly the same characters as test4.txt:
		`the line 1 is dancing.`
		`the line 2 is singing.`
			decompressedTest4.txt is created in the test-files directory.
			
			decompressedTest4.txt contains exactly the same characters as test4.txt:
			`the line 1 is dancing.`
			`the line 2 is singing.`

testCompressSingleLineWithWordThatHasRepeatedCharacterSequence Author: Jayani Sivakumar	Delete test-files/compressedTest5.txt, if it exists $ **java -cp bin Compression -C test-files/test5.txt test-files/compressedTest5.txt**	compressedTest5.txt is created in the test-files directory. compressedTest5.txt is exactly the same as exp_compressedTest5.txt: `$gret`	compressedTest5.txt is created in the test-files directory. compressedTest5.txt is exactly the same as exp_compressedTest5.txt: `$gret`
testDecompressSingleLineWithSameWordRepeated Author: Jayani Sivakumar	Delete test-files/decompressedTest5.txt, if it exists $ **java -cp bin Compression -D test-files/exp_compressedTest5.txt test-files/decompressedTest5.txt**	decompressedTest5.txt is created in the test-files directory. decompressedTest5.txt contains exactly the same characters as test5.txt: `regret`	decompressedTest5.txt is created in the test-files directory. decompressedTest5.txt contains exactly the same characters as test5.txt: `regret`

testCompressLargeFile Author: Dr. Balik	Delete test-files/compressedComputer.txt, if it exists $ **java -cp bin Compression -C test-files/computer.txt test-files/compressedComputer.txt**	compressedComputer.txt is created in the test-files directory. compressedComputer.txt contains exactly the same characters as exp_compressedComputer.txt	compressedComputer.txt is created in the test-files directory. compressedComputer.txt contains exactly the same characters as exp_compressedComputer.txt
testDecompressLargeFile Author: Dr. Balik	Delete test-files/decompressedComputer.txt, if it exists $ **java -cp bin Compression -D test-files/exp_compressedComputer.txt test-files/decompressedComputer.txt**	decompressedComputer.txt is created in the test-files directory. decompressedComputer.txt contains exactly the same characters as computer.txt	decompressedComputer.txt is created in the test-files directory. decompressedComputer.txt contains exactly the same characters as computer.txt