System Test Plan: Phrase Analyzer program

NOTE: You can stop program execution by pressing Ctrl+C.

Test ID	Description	Expected Results	Actual Results

testNoCommandLineArguments
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer`	`Usage: java -cp bin PhraseAnalyzer`
		`<phrase>`
		
		`<Program exits>`	

testPhraseWith2Smallest2LargestWords
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer Today is the first day of the rest of your life.`	`Smallest word(s): is, of`
		`Largest word(s): Today, first`
		`Average word length: 3.36`
		`Least frequently used letter(s):`
		`l, u`
		`Most frequently used letter(s): t`
		
		`<Program exits>`	

testPhraseWithSameLargestWordDifferentCase
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer Roses are red, some roses are blue.`	`Smallest word(s): are, red`
		`Largest word(s): Roses, roses`
		`Average word length: 3.86`
		`Least frequently used letter(s):`
		`b, d, l, m, u`
		`Most frequently used letter(s): e`
		
		`<Program exits>`	

testInvalidPhraseWithNonletters
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer March 7, 2023`	`Invalid phrase`
		
		`<Program exits>`	

testInvalidPhraseWithTooMuchPunctuation
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer Abc,.! xyz`	`Invalid phrase`
		
		`<Program exits>`	

Test ID	Description	Expected Results	Actual Results

testInvalidPhraseWithSingle PunctuationCharacter
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer abc ! def`	`Invalid phrase`
		
		`<Program exits>`	

testInvalidPhraseWithEmpty String
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer abc "" def`	`Invalid phrase`
		
		`<Program exits>`	

testInvalidPhraseWithPeriod InMiddleOfWord
 	
Author: Dr. Balik
	`$ java -cp bin PhraseAnalyzer Hello.World`	`Invalid phrase`
		
		`<Program exits>`	

testValidPhraseMultipleSam eWords
 	
Author: Riya Gunda
	`$ java -cp bin PhraseAnalyzer apple new apple wow`	`Smallest word(s): new, wow`
		`Largest word(s): apple`
		`Average word length: 4.00`
		`Least frequently used letter(s):`
		`n, o`
		`Most frequently used letter(s): p`
		
		`<Program exits>`	

testValidPhraseWithAllAlpha bets
 	
Author: Riya Gunda
	`$ java -cp bin PhraseAnalyzer abcdefghijklmnopqrstuvwxyz`	`Smallest word(s):`
		`abcdefghijklmnopqrstuvwxyz`
		`Largest word(s):`
		`abcdefghijklmnopqrstuvwxyz`
		`Average word length: 26.00`
		`Least frequently used letter(s):`
		`a, b, c, d, e, f, g, h, i, j, k,`
		`l, m, n, o, p, q, r, s, t, u, v,`
		`w, x, y, z`
		`Most frequently used letter(s): a,`
		`b, c, d, e, f, g, h, i, j, k, l,`
		`m, n, o, p, q, r, s, t, u, v, w,`
		`x, y, z`
		
		`<Program exits>`	

testValidPhraseSameLength Words
 	
Author: Riya Gunda
	`$ java -cp bin PhraseAnalyzer same word`	`Smallest word(s): same, word`
		`Largest word(s): same, word`
		`Average word length: 4.00`
		`Least frequently used letter(s):`
		`a, d, e, m, o, r, s, w`
		`Most frequently used letter(s): a,`
		`d, e, m, o, r, s, w`
		
		`<Program exits>`	

testInvalidPhraseNumbers	`$ java -cp bin PhraseAnalyzer 75`	`Invalid phrase`
		
		`<Program exits>`	

testValidPhrasePunctuation AfterEveryWord	`$ java -cp bin PhraseAnalyzer Hello. my.`
	`name. is. Riya.`
		`Smallest word(s): my, is`
		`Largest word(s): Hello`
		`Average word length: 3.40`
		`Least frequently used letter(s):`
		`h, n, o, r, s`
		`Most frequently used letter(s): a,`
		`e, i, l, m, y`	