

# The Test Manual of “Epidemic simulation” Simulation with GUI Implementation

Application Prog Using Java - CSCI 4963 - 01  
Homework 04

V 1.0.0

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## 0 TL;DR

This manual has been tested only for the console version, for a review of known issues in the GUI and potential test items, please refer to the user manual.

In this document, I will give a brief overview of the testing of the Draw and Guess program during its development and the testing guidelines that were followed. In this case, I will provide the expected output of some typical errors, which represent the solution of the program to deal with these problems.

Depending on the reality and size of the project, some sections will be adapted and removed from the template. For more information, please refer to other documents.

## 1 Testing plan

In this section, we will focus on the scope of the project and test for this, including test coverage, scheduling, features to be tested, etc.

### 1.1 Objectives

We want this program generates Draw and Guess ver. Real-Time starts with a dictionary input from a .csv file and starts to generate the secret words - graph based on the rules that you may check in manual.pdf.

If the program encounters invalid data input, it rejects any and handles all error conditions appropriately

### 1.2 Test schedule

Test	ID	Main Content	Planned	Completed
drawG-test-input-001	Valid input	Simple input test given invalid username	8/15/2022	8/15/2022
drawG-test-input-002	Valid input	Simple input test given invalid IP	8/15/2022	8/15/2022
drawG-test-input-003	Valid input	Simple input test given invalid port	8/15/2022	8/15/2022
drawG-test-read-001	invalid input	Simple read test given invalid input filename	8/15/2022	8/15/2022
drawG-test-read-002	invalid input	Simple read test given invalid input file category	8/16/2022	8/16/2022
drawG-test-data-001	Data Pack	Simple encoding and decoding test on data encryption - Unicode	8/16/2022	8/16/2022
drawG-test-data-002	Data Pack	Simple encoding and decoding test on data encryption - Base64	8/16/2022	8/16/2022
drawG-test-GUI-001	GUI	Simple test on button only display for host	8/17/2022	8/17/2022
drawG-test-GUI-002	GUI	Draw board only for painter	8/17/2022	8/17/2022
drawG-test-GUI-003	GUI	Draw board button only for painter	8/17/2022	8/17/2022
drawG-test-networking-001	Networking	player Join	8/18/2022	8/18/2022
drawG-test-networking-002	Networking	player Join in the middle of the Game	8/18/2022	8/18/2022
drawG-test-networking-003	Networking	player quit in the middle of the Game	8/18/2022	8/18/2022
drawG-test-networking-004	Networking	painter quit in the middle of the Game	8/18/2022	8/18/2022

### **1.3 Required resources**

This is a team project, and all the code and related documents have been done by the author(Yuetian Chen, Kevin Xia, Jeff Li). Some examples from the lecture may be used as syntax or algorithmic reference resources but no line of code comes from these files.

### **1.4 Test estimation**

To ensure that the test results are sufficiently reliable, each test will be conducted independently at least once in a different environment and the test results will be compared.

## 2 Testing strategy

In this section, we will introduce the guideline to follow during the test and discuss the testing platform for the console-only programs.

### 2.1 Scope and Test Approach

The scope of the test includes the entire Draw and Guess file, except for the test performed when checkRep() calls Draw and Guess as a type in another file. All other special cases will be included in the test. These include tests for some boundary values and tests for handling illegal input

### 2.2 Test Environment

- Windows 11 Pro for Workstations 21H2 (1000.22000.708.0)
  - jdk-17.0.3.1
- Ubuntu 22.04 LTS - on VMware Workstation 16 Pro(16.2.3 build-19376536)
  - openjdk-11.0.15

All operating system is 64 bits and has no change in base Java configuration.

### 2.3 Testing Tools

Considering that this program does not contain a GUI there is also not much output in the console. There is a clear indication of errors, so the only tools needed for testing are: vi & shell

## 3 Testing scenario

- Verify that the program can handle the error with illegal input
- Verify that the program can handle multiple players joining and quit
- Verify the encoding and the decoding of the data pack
- Verify that the program can handle the zero corner case
- Verify the difference between painter and guesser on the draw board
- Verify some of the GUI buttons only displays for certain user

## 4 Test cases

For reasons of brevity, the following omissions will appear in the following:

`[ClassName] = edu.rpi.cs.csci4963.u22.cheny63.project.drawAndGuessLauncher`

Test Case ID	drawG-test-input-001	Test Case Description	Simple input test given invalid username		
Created By	Jeff Li	Reviewed By	Jeff Li	Version	1.0
QA Tester's Log	N/A				
Tester's Name	Jeff Li	Date Tested	8/16/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Application compiled successfully		1	inputFileName = ..\src\res\dataset\dataset1.csv	
2	dataset1.csv is ready to go		2	No Error through inputting file	
3	input valid ip and port		3		
4	input valid username		4		
Test Scenario	Verify that the program can handle the error with illegal input				
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess	Run without Runtime Exception	As Expected	Pass	
2	click the Creat a Room button to input the data	a window to input comes out	As Expected	Pass	
3					
4					

Test Case ID	drawG-test-input-002	Test Case Description	Simple input test given invalid IP		
Created By	Jeff Li	Reviewed By	Jeff Li	Version	1.0
QA Tester's Log	N/A				
Tester's Name	Jeff Li	Date Tested	8/16/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Application compiled successfully		1	inputFileName = ..\src\res\dataset\dataset1.csv	
2	dataset1.csv is ready to go		2	The Error window pops out	
3			3		
4			4		
Test Scenario	Verify that the program can handle the error with illegal input				
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess	Run without Runtime Exception	As Expected	Pass	
2	Run with the error windows pops out	send back to the input page	As Expected	Pass	
3					
4					

Test Case ID	drawG-test-input-003	Test Case Description	Simple input test given invalid port		
Created By	Yuetian Chen	Reviewed By	Yuetian Chen	Version	1.0
QA Tester's Log	N/A				
Tester's Name	Yuetian Chen	Date Tested	8/16/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Application compiled successfully		1	inputFileName = ..\src\res\dataset\dataset1.csv	
2	dataset1.csv is ready to go		2	The Error window pops out	
3			3		
4			4		
Test Scenario	Verify that program can operate in normal case, no corner case need to detect in this test				
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess	Run without Runtime Exception	As Expected	Pass	
2	Run with the error windows pops out	send back to the input page	As Expected	Pass	
3					
4					



Test Case ID		drawG-test-read-001		Test Case Description		Simple read test given invalid input filename					
Created By		Yuetian Chen		Reviewed By		Yuetian Chen		Version		1.0	
QA Tester's Log		N/A									
Tester's Name		Yuetian Chen		Date Tested		8/16/2022		Test Case (Pass/Fail/Not Executed)		Pass	
S #		Prerequisites:						S #	Test Data		
1		Application compiled successfully						1	inputFileName = ..\src\res\dataset\test4.csv		
2		dataset1.txt is ready to go						2	No file named as test4.csv in destination		
3								3			
4								4			
Test Scenario		Verify that the program can handle the error with illegal input, no corner case need to detect in this test									
Step #		Step Details			Expected Results		Actual Results		Pass / Fail / Not executed / Suspended		
1		Run Draw and Guess based on given parameter			Run without Runtime Exception		As Expected		Pass		
2		input wrong file name			wrong file name		As Expected		Pass		
3											
4											

Test Case ID		drawG-test-read-002	Test Case Description		Simple read test given invalid input file category		
Created By		Kevin Xia	Reviewed By		Kevin xia	Version	1.0
QA Tester's Log		N/A					
Tester's Name		Kevin Xia	Date Tested		8/17/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #		Prerequisites:			S #	Test Data	
1		Application compiled successfully			1	inputFileName = ..\src\testresources\dataset1.txt	
2		dataset1.csv is not ready to go			2		
3					3	input other components correctly	
4					4		
Test Scenario		Verify that the program can handle the error with illegal input					
Step #		Step Details		Expected Results		Actual Results	Pass / Fail / Not executed / Suspended
1		Run Draw and Guess based on given parameter		Run without Runtime Exception		As Expected	Pass
2		Get into the create room input page amount		a error message window will pop		As Expected	Pass
3		Exception throw correctly		Notice that file doesn't exist		As Expected	Pass
4							

Test Case ID	drawG-test-data-001	Test Case Description	Simple encoding and decoding test on data encryption - Unicode		
Created By	Jeff Li	Reviewed By	Jeff Li	Version	1.0
QA Tester's Log	N/A				
Tester's Name	Jeff Li	Date Tested	8/17/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Application compiled successfully		1	inputFileName = ..\res\dataset\dataset1.csv	
2	dataset1.csv is ready to go		2		
3			3		
4			4		
Test Scenario	Verify the encoding and the decoding of the data pack				
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess based on given parameter	Run without Runtime Exception	As Expected	Pass	
2	Data output correct	No output file generated	As Expected	Pass	
3	Exception throw correctly	Notice that row/col is not a number	As Expected	Pass	
4					

Test Case ID		drawG-test-data-002	Test Case Description		Simple encoding and decoding test on data encryption - Base64		
Created By		Jeff Li	Reviewed By		Jeff Li	Version	1.0
QA Tester's Log		N/A					
Tester's Name		Jeff Li	Date Tested		8/17/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #		Prerequisites:			S #	Test Data	
1		Application compiled successfully			1	inputFileName = ..\res\dataset\dataset1.csv	
2		dataset1.csv ready to go			2		
3					3		
4					4		
Test Scenario		Simple encoding and decoding test on data encryption					
Step #		Step Details		Expected Results		Actual Results	Pass / Fail / Not executed / Suspended
1		Run Draw and Guess based on given parameter		Run without Runtime Exception		As Expected	Pass
2		Encoding process success		successfully encode the data		As Expected	Pass
3		Decoding works correctly		Successfully decoded the data		As Expected	Pass
4							

Test Case ID	drawG-test-GUI-001	Test Case Description	Simple test on button only display for host		
Created By	Yuetian Chen	Reviewed By	Yuetian Chen	Version	1.0
QA Tester's Log	N/A				
Tester's Name	Yuetian Chen	Date Tested	8/17/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Application compiled successfully		1	inputFileName = ..\res\dataset\dataset1.csv	
2	dataset1.csv is not ready to go		2		
3			3		
4			4		
Test Scenario	Verify some of the GUI buttons only displays for certain user				
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess based on given parameter	Run without Runtime Exception	As Expected	Pass	
2	Join another user to connect with the host	join success	As Expected	Pass	
3	Button showing correctly	Notice that only the host can see the button, others no	As Expected	Pass	
4					

Test Case ID	drawG-test-GUI-002	Test Case Description		Draw board only for painter		
Created By	Yuetian Chen	Reviewed By		Yuetian Chen	Version	1.0
QA Tester's Log	N/A					
Tester's Name	Yuetian Chen	Date Tested		8/17/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:			S #	Test Data	
1	Application compiled successfully			1	inputFileName = ..\res\dataset\dataset1.csv	
2	dataset1.csv is not ready to go			2		
3				3		
4				4		
Test Scenario	Verify the diference between painter and guesser on the draw board					
Step #	Step Details	Expected Results		Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess based on given parameter	Run without Runtime Exception		As Expected	Pass	
2	only painter can change the draw board	painter can draw the board and the guesser can get the data and see the painter drawing		As Expected	Pass	
3						
4						

Test Case ID	drawG-test-networking-002	Test Case Description	player Join in the middle of the Game		
Created By	Kevin Xia	Reviewed By	Kevin Xia	Version	1.0
QA Tester's Log	N/A				
Tester's Name	Kevin Xia	Date Tested	8/18/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Application compiled successfully		1	inputFileName = ..\res\dataset\dataset1.csv	
2	dataset1.csv is ready to go		2	input argument all valid	
3			3		
4			4		
Test Scenario	Verify that the program can handle multiple players joining and quit				
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess based on given parameter	Run without Runtime Exception	As Expected	Pass	
2	Create a room and let 1 user to join the Game amount	Run without Runtime exception	As Expected	Pass	
3	Game start and let one user join now	The client will show a message that unable to connect	As Expected	Pass	
4					

Test Case ID	drawG-test-networking-003	Test Case Description	player quit in the middle of the Game		
Created By	Kevin Xia	Reviewed By	Kevin Xia	Version	1.0
QA Tester's Log	N/A				
Tester's Name	Kevin Xia	Date Tested	8/18/2022	Test Case (Pass/Fail/Not Executed)	Pass
S #	Prerequisites:		S #	Test Data	
1	Application compiled successfully		1	inputFileName = ..\res\dataset\dataset1.csv	
2	dataset1.csv is ready to go		2		
3			3		
4			4		
Test Scenario	Verify that the program can handle multiple players joining and quit				
Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended	
1	Run Draw and Guess based on given parameter	Run without Runtime Exception	As Expected	Pass	
2	user create the game and another 2 user joined the game	Run without exception	As Expected	Pass	
3	Game start, a user quit the game	A notice is send showing in the host size	As Expected	Pass	
4					