P2.2 TEST PLAN

MULTITHREADED LOCAL JAVA CLIENT

VERSION 1

OCT 18, 2017

RICHARD CONSTANTINE

#7686561

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1 – TPP VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason	Mark
1	Richard Constantine	10/18/2017				

2 - INTRODUCTION

2.1 PURPOSE OF THE TEST PLAN TEMPLATE DOCUMENT

The purpose of this test plan document is to test the multithreaded java client developed to connect to the basic time server provided by in class. The client program should be capable of handling multiple client connections to the server and while providing the user commands to create more clients and connect to the server, request the time from the server, as well as disconnect and close the program,

3 – MULTITHREADED LOCAL JAVA CLIENT

3.1 TEST PLAN AND CASES

Item to Test	Test Description	Test Date	Responsibility
Multithreaded Java Client	The client program should be capable of creating multiple, functional clients who can request the time from the provided server, while providing the user control over client connections and closing the program.	Oct 18, 2017	Richard Constantine

3.2 TEST PROCEDURE

Instruction		P/F
1.	Ensure the PC being used has an up-to-date version of Windows (Windows 7 or later) along with the Netbeans IDE, ensuring to download the Java JDK (these can be found via google).	
2.	Go to the Google OneDrive URL sent via email. This should take you a folder called Richard Constantine - 7686561 - ECE 3740 - Assignment 3. Download and extract all files within Constantine_Richard_P2.2.zip, and place its contents in a directory called C:\Users\<YourUsername>\ECE3740\MPLABXProjects\Constantine_Richard_P2\P2.2.	
3.	Start the Netbeans IDE by doubling clicking the desktop icon, or locating the install file and running the .exe.	
4.	Next, within Nebeans, open the Server project by selecting File –> Open Project. Browse to C:\Users\<YourUsername>\ECE3740\MPLABXProjects\Constantine_Richard_P2\P2.2\v2 and open the project called Server.	
5.	Also within Nebeans, open the Client project by selecting File –> Open Project. Browse to C:\Users\<YourUsername>\ECE3740\MPLABXProjects\Constantine_Richard_P2\P2.2\v2 and open the project called Client.	

6.	Within the projects tab of Netbeans, open Source Packages (by doubling clicking), then open the servertest package, as well as the servertest.java.	
7.	Run the server by highlighting the Server project in the Projects tab and selecting Run -> Run Project (Server). First, create server socket by entering '6' into the server command interface, followed by a '2' to start listening.	
8.	Within the projects tab of Netbeans, open Source Packages (by doubling clicking), then open the clienttest package, as well as the clienttest.java.	
9.	Next, run the client program by highlighting the Client project in the Projects tab and selecting Run -> Run Project (Client).	
10.	Test that the client can create a connection with the server by entering '1' in the client command interface, which creates a connection between the server and client. A message should appear confirming the connection. (This can also be confirmed by looking at the server output).	
11.	Test that the time can be retrieved from the server by entering '3' in the client command interface and confirm that the time received is correct. Do this a few times to confirm the connection is established. (This can also be confirmed by looking at the server output).	
12.	Test that the client can correctly disconnect by entering '2' into the client command interface. (This can also be confirmed by looking at the server output).	
13.	Test that the client can correctly reconnect to the server by entering '1' in the client command interface.	
14.	Test that the time can still be received correctly by the server.	
15.	Next, connect a second client by either: • Opening the servertest.java file in the Projects tab, then again opening clienttest.java once again will allow Netbeans to run another instance of the client by again selecting Run -> Run Project (Client). • Open another instance of Netbeans as well as another instance of clienttest.java and run that instance. • Open Windows Command Prompt by searching for "cmd" within the OS. Change directory by entering "cd C:\Users\<YourUsername>\ECE3740\MPLABXProjects\Constantine_Richard_P2\P2.2\v2\Client\src\clienttest" then entering "javac clienttest" to compile, as well as "java clienttest" to run the program (within command the Command Prompt).	
16.	Test that both client connections can still connect, request the time, and disconnect, using the procedure as steps 10, 11, and 12.	
17.	Shutdown both clients by entering "4" into the client command interfaces, then shutdown the server by enter '1' into the server command interface.	

4 - TEST PLAN TEMPLATE APPROVAL

The undersigned acknowledge they have reviewed the P1.1.1 Test Plan Template document and agree with the approach it presents. Any changes to this Requirements Definition will be coordinated with and approved by the undersigned or their designated representatives.

Required Signatures:

- TA - Kaiser Nahiyan

Signature: _____ Date: _____

Print Name: _____

Title: _____

Role: _____

REFERENCES

[1] K. Ferens, "ECE 3740 Systems Engineering Principles 1," 15 September 2001. [Online]. Available: http://ece.eng.umanitoba.ca/undergraduate/ECE3740/. [Accessed 16 September 2017].