



[Document type]

Test Report

[Subtitle]



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Semester: HT20
Course code: 2DV610



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Appendix



1 Introduction

Software Development Company (SDC) aims to redistribute a simple to deploy web-server on a wide range of Internet Of Things (IOT) to present information from sensors etc. The web-server can be deployed on many different platforms and therefore that can attract attention of a wide range of IOT developers. The SDC management has found an open source abandonware software called “My Web Server” that may fulfill the requirements as stated in the requirement document. One test lead needs to deliver a strategy, plan, test-cases as well as a test-report in one week.

2 Test Traceability

Requirements Identifiers	Reqs Tested	UC1	UC2	UC3	Req2	Req3	Req4
Test Cases	10	1	1	1	1	5	1
1 (1.1, 1.4)	2	x				x	
2 (1.2, 1.2.a)	2		x			x	
3 (2.1, 2.2)	2			x		x	
4 (3.1, 3.2)	2				x	x	
5 (Req4)	2					x	x

3 Manual Tests Overview

Test Case	Requirement	Pass / Fail
TC1	UC1, Req3	Pass
TC2	UC2, Req3	Pass
TC3	UC3, Req3	Pass
TC4	Req2, Req3	Pass
TC5	Req4, Req3	Fail



4 Manual Test Cases

4.1 Test Case 1: Start Server Successfully

Use Case: UC 1. Start Server

Requirement: Req3

Scenario: Starts when an administrator wants to start the server. The system starts a web server on the given port and presents that the server was started and write a note in the access log.

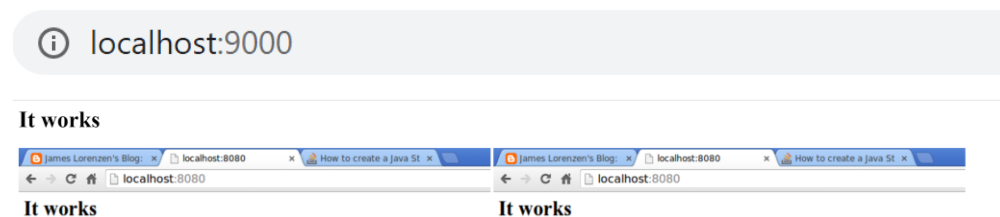
Precondition: The server is not deployed yet

Test Steps:

1. Set Project JDK to java “version 1.7” and Project language level to “7 – Diamonds, ARM, multi-catch etc”.
2. Edit Configuration for the class “HTTPServerConsole”, and set Program Arguments as “9000
C:/Github/Repository/2DV610/MyWebServer-master/bin/se/lnu/http/resources/inner/”.
3. In terminal enter “ java se.lnu.http.HTTPServerConsole 9000
~/MyWebServer-master/bin/se/lnu/http/resources/inner/”.
4. In web broser enter “localhost:9000”.

Expected Results:

Web browser:



Console:



```
HTTPServerConsole x
"C:\Computer Science\Programming\Java\JDK\7\jdk1.7.0_80\bin\java.exe" ...
HTTP Server object constructed
HTTP Server started
Accept
|

ClientThread 2 served file : works2.png
ClientThread stopped nr: 1
ClientThread stopped nr: 2
Accept
ClientThread started nr: 3
ClientThread 3 served file : index.html
ClientThread 3 served file : works.png
ClientThread 3 served file : works2.png
ClientThread stopped nr: 3
```

Actual Results: Pass



4.2 Test Case 2: Start Server with Taken Socket Port Number

Use Case: UC 1.2. Start Server

Requirement: Req3

Scenario: System asks for socket port number and shared resource container.

The web server could not be started due to the socket was taken.

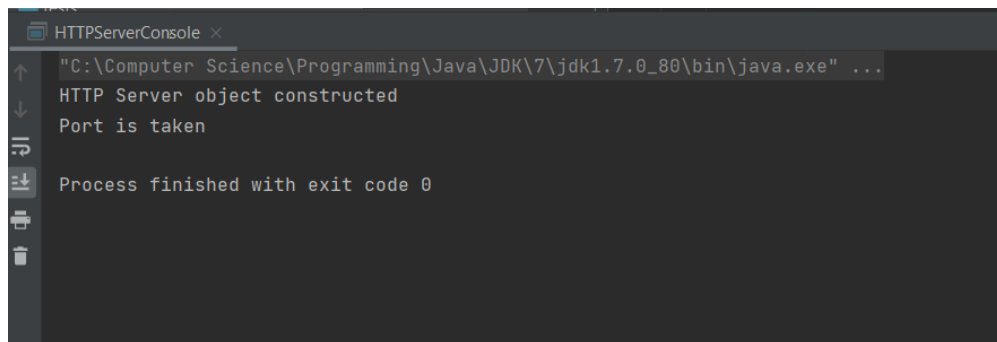
Precondition: The server is not deployed yet

Test Steps:

1. Set Project JDK to java “version 1.7” and Project language level to “7 – Diamonds, ARM, multi-catch etc”.
2. Edit Configuration for the class “HTTPServerConsole”, and set Program Arguments as “80
C:/Github/Repository/2DV610/MyWebServer-master/bin/se/lnu/http/resources/inner”.
3. In terminal enter “ java se.lnu.http.HTTPServerConsole 80
~/MyWebServer-master/bin/se/lnu/http/resources/inner”.
4. In web broser enter “localhost:80”.

Expected Results:

Console:



```
HTTPServerConsole x
"C:\Computer Science\Programming\Java\JDK\7\jdk1.7.0_80\bin\java.exe" ...
HTTP Server object constructed
Port is taken
Process finished with exit code 0
```

Actual Results: Pass



4.3 Test Case 3: Stop Server Successfully

Use Case: UC 2. Stop Server

Requirement: Req3

Scenario:

1. Starts when a user wants to stop the server.
2. The system stops the web server and presents that the webserver has been stopped.

Precondition: A web server has been started.

Test Steps:

1. Type “stop” in the console.
2. Navigate to web server.

Expected Results:

Web browser:

localhost:9000



This site can't be reached

localhost refused to connect.

Try:

- Checking the connection
- [Checking the proxy and the firewall](#)

ERR_CONNECTION_REFUSED

Reload

Console:



```
HTTPServerConsole x
ClientThread 1 served file : works.png
ClientThread 2 served file : works2.png
ClientThread stopped nr: 1
ClientThread stopped nr: 2
stop
HTTP Server Accept thread stopped
HTTP Server stopped

Process finished with exit code 0
```

Actual Results: **Pass**



4.4 Test Case 4: Request Shared Resource Not Found

Use Case: UC 3. Request Shared Resource

Requirement: Req2, Req3

Scenario: The system delivers the shared resource to the browser and a success message is written to the access log. The shared resource cannot be found.

Precondition: A web server has been started.

Test Steps:

1. Remove the secret.html file.
2. Navigate to web server.

Expected Results:

Web browser:

localhost:9000

404 Not found

Console:

```
HTTPServerConsole x
"C:\Computer Science\Programming\Java\JDK\7\jdk1.7.0_80\bin\java.exe" ...
HTTP Server object constructed
HTTP Server started
Accept
Accept
ClientThread started nr: 1
ClientThread stopped nr: 1
```

Actual Results: Pass



4.5 Test Case 5: GPL-2.0

Requirement: Req4

Scenario: The source code should be released under GPL-2.0

Precondition: A web server has been started.

Test Steps:

1. Check LICENSE file.

Expected Results:

GPL-2.0 (General Public License, version 2)

Actual Results: **Fail**

MIT (Massachusetts Institute of Technology License)

```
The MIT License (MIT)
```

```
Copyright (c) 2014 Daniel Toll
```

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```



5 JUnit Tests

AcceptThreadTest			206 ms
AcceptThreadTest.testStopNotRunning	passed	166 ms	
AcceptThreadTest.testRun	passed	38 ms	
AcceptThreadTest.testSocketFailed	passed	2 ms	
ClientSocketTest			3 ms
ClientSocketTest.testWriteResponseBody	passed	1 ms	
ClientSocketTest.testWriteResponseHeader	passed	1 ms	
ClientSocketTest.testGetRequest	passed	1 ms	
ClientThreadTest			29 ms
ClientThreadTest.testMalformed	passed	17 ms	
ClientThreadTest.testRun	passed	10 ms	
ClientThreadTest.testMultipleConnections	passed	2 ms	
HTTPReaderTest			7 ms
HTTPReaderTest.testBroken	passed	5 ms	
HTTPReaderTest.testBroken2	passed	1 ms	
HTTPReaderTest.testReadBody	passed	1 ms	
HTTPReaderTest.testReadOk	passed	0 ms	
HTTPRequestParserTest			0 ms
HTTPRequestParserTest.testMalformedRequest	passed	0 ms	
HTTPRequestParserTest.testMalformedRequestEmpty	passed	0 ms	
HTTPRequestParserTest.testMalformedRequest2	passed	0 ms	
HTTPRequestParserTest.testParseRequest	passed	0 ms	
HTTPRequestParserTest.testMalformedRequestNoHost	passed	0 ms	
HTTPRequestTest			0 ms
HTTPRequestTest.testGetURL	passed	0 ms	
HTTPServerConsoleTest			17 ms
HTTPServerConsoleTest.testRunConsoleNoPort	passed	13 ms	
HTTPServerConsoleTest.testRunConsolePort80	passed	1 ms	
HTTPServerConsoleTest.runOnTakenPort	passed	3 ms	
HeaderTest			1 ms
HeaderTest.testFromString	passed	1 ms	
HeaderTest.testFromString2	passed	0 ms	
HeaderTest.testFromString3	passed	0 ms	
HeaderTest.testFromString4	passed	0 ms	
PortTest			0 ms
PortTest.testPort0	passed	0 ms	
PortTest.testPortTooLarge	passed	0 ms	
PortTest.testPortOk	passed	0 ms	
ResponseFactoryTest			9 ms
ResponseFactoryTest.testBad	passed	6 ms	
ResponseFactoryTest.testUnknownMethod	passed	0 ms	
ResponseFactoryTest.testGetResponseGETRoot	passed	1 ms	
ResponseFactoryTest.testGetResponseUnexistingFile	passed	1 ms	
ResponseFactoryTest.testIllegalFile	passed	1 ms	
ServerFactoryTest			1 ms
ServerFactoryTest.testCreate	passed	1 ms	
SharedFolderTest			7 ms
SharedFolderTest.testGetNonExistantFile	passed	1 ms	
SharedFolderTest.testGetIllegalFile	passed	1 ms	
SharedFolderTest.testGetRootURL	error	5 ms	
HTTPServerTest			441 ms
HTTPServerTest.testStart	passed	116 ms	
HTTPServerTest.testStop	passed	324 ms	
HTTPServerTest.testStartHTTPServer	passed	1 ms	
HTTPServerTest.testStopWhenNotStarted	passed	0 ms	
SocketClientTest			108 ms
SocketClientTest.testGetFromOnlineServer	error	108 ms	
StressTest			3.12 s
StressTest.stressTest	failed	3.12 s	
ContentTypeTest			0 ms
ContentTypeTest.testGetFromFileEnding	passed	0 ms	
ErrorResponses			11 ms
ErrorResponses.test400	passed	11 ms	
HTMLFileResponseTest			3 ms
HTMLFileResponseTest.testWriteResponse	error	3 ms	
ConsoleViewTest			7 ms
ConsoleViewTest.testNoArguments	passed	0 ms	
ConsoleViewTest.testOkDirectory	passed	1 ms	
ConsoleViewTest.testNotADirectory1	error	2 ms	
ConsoleViewTest.testDoNotStop	passed	1 ms	
ConsoleViewTest.testShowhelp	passed	0 ms	
ConsoleViewTest.testDoStop	passed	0 ms	
ConsoleViewTest.testOkPort	passed	0 ms	
ConsoleViewTest.testCrapArgument1	passed	1 ms	
ConsoleViewTest.testCrapArgument2	passed	0 ms	
ConsoleViewTest.testPortTaken	failed	2 ms	



6 Resources

Resource Type	Resource
Staff	1 Test Lead
Time	At Least 20 Hours
Equipment	Windows 10 Home with Processor Intel® Core™ i7-10519U CPU @ 1.80GHz 2.30 GHz
Software	IntelliJ IDEA 2020.3 JDK: Java Version 1.7 Web-Browser: Chrome JUnit Apache JMeter

7 Conclusion

During testing process, the manual testing resulted in more failed tests than the result. Because some of the test cases are combined, therefore, they do not present the precise result. The source code is not released under GPL-2.0 but actually having a MIT License.