

Evaluation

7.1. Introduction

Evaluation of the system was done with ‘black box’ testing, evaluation of the system by the user (expert panel) and the performance testing in different web browsers with different operating systems.

7.1.1 Software testing

Testing will be done according to the activity diagrams.

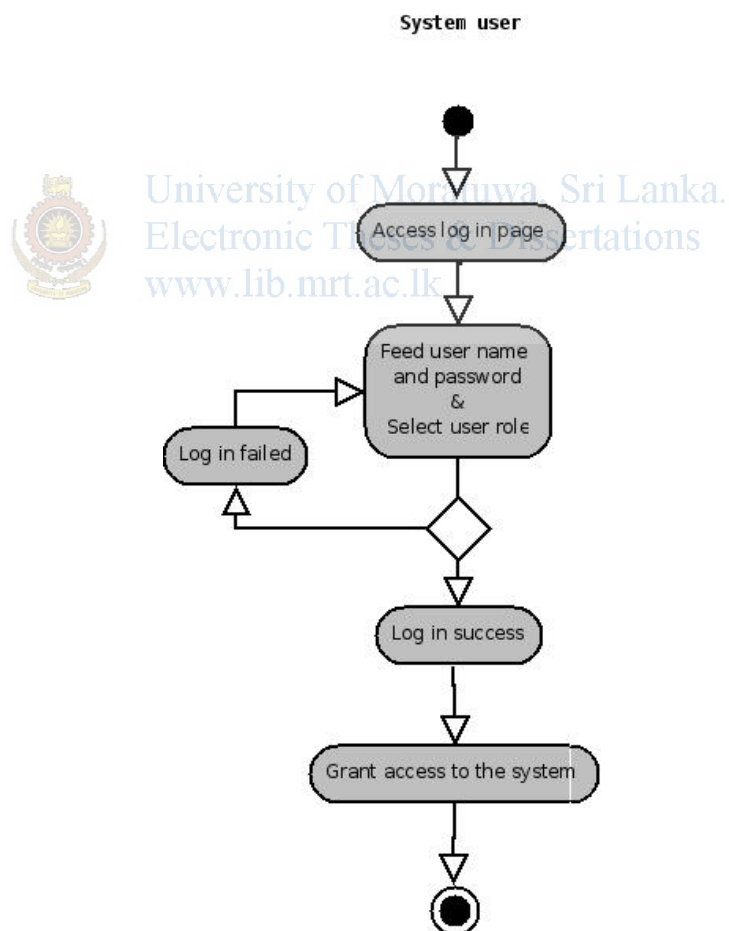


Figure 24: Login activity Diagram

Each activity diagram had a set of test cases based on the possible scenarios that activity diagram may have.

The list of scenarios for the test cases for the above shown activity diagram is as follows.

- No user name, role and password
- Incorrect user name, role and password
- Incorrect user name only
- Incorrect role only
- Incorrect password only
- Incorrect user name and role
- Incorrect user name and password
- Incorrect password and role
- Correct user name and incorrect role and password
- Correct role and incorrect user name and password
- Correct password and incorrect user name and role
- Correct user name and password, incorrect role
- Correct user name and role, incorrect password
- Correct role and password, incorrect user name
- Correct user name, Role and password

The test case for, 'No user name, role and password' scenario is shown below.

Figure 25: Test Case for 'No user name, role and password'

(TC 01)Test Case Name : Login- No user name, role and password

Test Case ID		LOG 01
Tested Component		Login
Tested Area		Login function
Purpose		Test login control behavior with no parameters
Prerequisites		Open index.php. Login box should be visible with blank input boxes for name and password, role – default 'Receive'
Test Data		Empty
Test Case Description		
No.	Test Case	Expected output
1	Click 'Login'	Pop up 'Enter name'
2	Click 'Clear'	No change in the screen
3		

Similarly, sequence diagrams and Graphical User Interface will also be used to generate test cases where appropriate.

Test result for the above test case should be as follows.

Figure 26: Test Results for 'No user name, role and password

(TC 01) Test Case Name : Login- No user name, role and password

Test Case ID		LOG01
Tested Component		Login
No	Test Results Description	
1	Test Case	: No user name, role and password
	Input Specification	: No input. Click on 'Login'
	Sample Data	: None
	Test Result	: Pop up box 'Enter name'
	Remarks	: (Role – Receive selected by default) No change in the screen - PASS
2	Test Case	: No user name, role and password
	Input Specification	: No input. Click on 'Clear'
	Sample Data	: None
	Test Result	: No change in the screen
	Remarks	: PASS
3	Test Case	:
	Input Specification	:
	Sample Data	:
	Test Result	:
	Remarks	:

Complete set of test cases and test results are available in the appendix G.

7.3 Product evaluation by the user

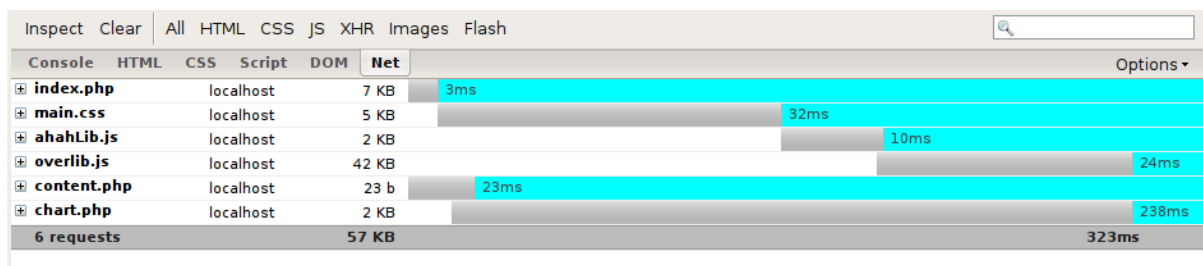
Questioner was prepared (Appendix I) and the system to be analyzed by clerical level staff, MLT and a microbiologist. Features like system usability, understandability, operability, installability, learnability etc will be assessed based on system functionalities.

Further to this the system was tested by an expert panel of microbiologists led by Professor N

de Silva (Consultant Microbiologist, TH Galle & MRI).

7.4 Performance testing (Response time)

Application is tested with FireBug web development tool was used to test the response time of the application. Each component of a page will be shown with approximate time to load.



The screenshot shows the Firebug 'Net' tab with a table of loaded resources. Each row includes a checkbox, the resource name, its source (localhost), size, and a horizontal bar representing the load time. The total for 6 requests is 57 KB and 323ms.

	Console	HTML	CSS	Script	DOM	Net	
☒	index.php					localhost	7 KB 3ms
☒	main.css					localhost	5 KB 32ms
☒	ahahLib.js					localhost	2 KB 10ms
☒	overlib.js					localhost	42 KB 24ms
☒	content.php					localhost	23 b 23ms
☒	chart.php					localhost	2 KB 238ms
						6 requests	57 KB 323ms

Figure 27: Screen shot of Firebug testing tool

7.5 Browser compatibility

System was tested for 3 major web browsers, namely the Internet Explorer, FireFox and Opera. Mainly the behavior of the Cascading Style Sheet was inspected under different monitor resolutions.



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Summary

This chapter was mainly concentrated on the system testing using black box testing, system testing by users and performance testing.

In the next chapter, further activities to be carried out will be discussed.