INFO 6055

Non-Functional Testing Assignment 5

## Student name\_: Amanjot kaur\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Student ID\_: 0914790\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Student name\_: Manpreet kaur\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Student ID\_\_\_\_\_\_\_\_\_\_\_\_\_0962955\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Description – Non-functional requirements

Failover and replication Test

Marks - 50

Instructions

Follow these instructions closely.

* This is a group assignment. Paired testing. Find a partner.
* You will be investigating a high availability application and testing its availability
* You will be determining what you need to test. Test it and determine if it meets your satisfaction for availability.

# Setup

* Your test environment consists of an Apache HTTP server acting as a load balancer against a cluster of two Tomcat servers connected to two replicated instances of MySQL.



* The application only writes to the master, which then replicates the data to the slave.
* The Apache HTTP server load balances by switching requests sent to each Tomcat server.

# Your Objective

* Determine through tests whether this arrangement provides high availability.
* Does the current environment work? Are there any defects?
* You are not testing the functionality of the application only the environment.

# Your steps

### Start the test environment.

### Using the diagram devise tests to exercise failover and replication.

### Use the table provided in this document to record your test steps, your results and your final conclusions.

# Installation and usage of the test environment

### Unzip the file “INFO6055InClass5-TestEnv.zip” straight to your C: drive.

### Your file structure should be shown as C:\HA\ and under the HA folder you should see:

### Mysql

### Tomcat

### Apache24

### Several batch files

### Ensure that no instances of mysql is running currently. You can verify this from task manager, and stop the task mysqld.exe if it is running currently.

### To start your environment run “startHA.bat”

### When you are done this assignment you will run “shutdownHA.bat”

### Afterwards you will still have windows open. Use control-c or close with the “x” button.

### To access each database instance run the two batch files

### sqlToolMaster.bat

### sqlToolSlave.bat

### If you are prompted to change the password, you may use the following command:

### alter user 'root'@'localhost' identified by 'root'

### To access the application open your browser and go to

### <http://localhost/highavailability>

### Please provide required screenshots based on your judgement to prove that your test cases worked properly. Even if you encounter issues with setting up the test environment, please put clearly what are your test cases, how far you have gone with the test setup etc., and what are the issues that you have encountered for awarding mark on the work done.

### Good luck and have fun.

Add rows where required

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test name or Step #** | | **Description** | **Expected outcome** | **Result** |
| TC\_Start\_No1 | startHA.bat is used to run for smoke test to run the environment | | All windows should be opened | It opens many windows of MySQL where except Tomcat node 2 ,all windows were opened  (Pass) |
| TC\_Master\_file\_No\_2 | Double click on sqlTooMaster.bat | | It should open Master MySQL file | Pass |
| TC\_Slave\_file\_No\_3 | Double click on sqlTooSlave.bat | | It should open Slave MySQL file | Pass |
| TC\_Highavailability\_node1\_No\_4 | Started local host in browser | | Open user registration for Node1 | Pass |
| TC\_Highavailability\_node2\_No\_5 | Started local host in browser | | Open user registration for Node2 | Pass |
| TC\_Submit\_data\_Nodes\_No\_6 | Entered data in both the forms | | Give successful message | Pass |
| TC\_Updated\_Master\_Database\_No\_7 | Will update the database | | Show both the data in Master database | Pass |
| TC\_Updated\_Slave\_Database\_No\_8 | Will update the database in slave node | | Show both the data in Slave database | Fail |
| TC\_Registration\_No\_9 | Data entered in only three fields and submit | | It should fail | Pass |
| TC\_Node2\_closed | Only node 1 working | | After refresh it should show node 1 only | PAss |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |
|  |  | |  |  |

TC\_Updated\_Slave\_Database\_No\_8 : This test case do not update database in Slave database file but successfully update in Master file. It do not replicate master file’s data into master file.

TC\_Registration\_No\_9 : It should fail because all fields are mandatory but instead It shows Pass

You must submit this document to the “assignment Five” drop box.   
One submission per team. Make sure both persons names are on the submission.

The marking scheme is found on the last page.

Do not zip anything.

## Marking Scheme:

|  |  |  |
| --- | --- | --- |
| **Marks Available** | **What Are the Marks Awarded For?** | **Marks Awarded** |
|  | | |
| **15** | **Valid tests that exercise the availability concepts** |  |
| **15** | **Test results are correct and thorough** |  |
| **10** | **Tests prove the environment works or does not** |  |
| **5** | **Spelling and grammar** |  |
| **5** | **Followed all instructions to the letter** |  |
| **\_\_\_ 50** | **TOTAL MARKS** |  |

Screenshots :















