

2CSDE80 Software Testing and Quality Assurance

Lab-3 Task

Submitted by: Labdhi Sheth 18BCE101

Aim: To study and perform sample tests using Test Link Testing tool

Methodology followed:



Part 1: Installation of TestLink

- **Installation process**

Since TestLink is a web application it follows the concept of client/server. It means that TestLink can be installed centrally on a server and users can interact with it through web browsers using a website from any computer.

1. Web Server – TestLink supports Apache 2.2.2.1. However, it can work with any latest web server software. TestLink only uses .php file. Configure the webserver with the .php extension only.
2. PHP – The web server should support PHP. It can be installed as CGI or any other integration technology. It is recommended to use the 5.3.8 PHP version.

3. Mandatory PHP Extensions – Extensions for RDBMS are mysqli, pgsql, oci8, sqlsrv. Mbstring is required for Unicode – UTF-8 support.
4. Optional Extensions – Curl, GD, Fileinfo
5. Database – TestLink requires the database to store its data. MySQL (5.5.16) is recommended.
6. FileZilla FTP Server – FileZilla FTP Server 0.9.39 is required to install XAMPP as optional.

Thus from Bitnami website download the installer and keep MySQL and Apache running and login to the testlink site for further process.

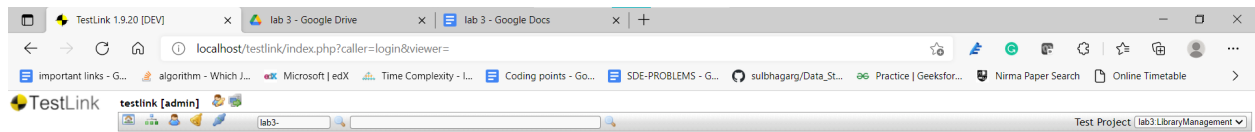
● Advantages

1. It supports multiple projects
2. Open-source tool
3. Provides the GUI
4. Easy export and import of test cases
5. Easy to integrate with many defect management tools
6. Automated test cases execution through XML-RPC
7. Easy filtration of test cases with version, keywords, test case ID, and version
8. Easy to assign test cases to multiple users
9. Easy to generate test plan and test reports in various formats
10. Provide credentials to multiple users and assign roles to them

● Disadvantages

1. Integration with Automated Suite is not possible.
2. Integration with Defect Tracking Tools is not easy so difficult to link defects with failed test cases
3. TestLink does not allow the provision to test mobile applications.
4. With the advancement of web technologies and increased complexities, sometimes the tester finds it difficult to use this tool for test management.
5. There are other powerful tools available in the market with increased flexibilities and options with which TestLink may not compete well.

Part 2: Test cases on library management system



Navigator - Test Specification

Settings

Update tree after every operation ☒

Filters

Test Case ID: lab3-

Test Case Title:

Test Suite: Select an Option

Platforms: Select Some Options

Status: Select Some Options

Importance: Select Some Options

Execution type: [Any]

Apply Reset Filters

Expand tree Collapse tree

- LibraryManagement (8)
 - Registration Test Suite (0)
 - Login Test Suite (2)
 - Book Entry Test Suite (2)
 - User Account Form (2)
 - Book Issue Test Suite (2)
 - Book Return Test Suite (0)

Test Project : Login Test Suite

Move/Copy Test Cases

Choose a target: Registration Test Suite

☒ Copy keywords

☒ Copy Requirement Assignments

Show 25 entries

| Test Case | Summary | Status | Importance | Execution type |
|---|---|------------------|------------|----------------|
| <input type="checkbox"/> lab3-1 : Valid entries | Software should display main window | Ready for review | Medium | Manual |
| <input type="checkbox"/> lab3-2 : Invalid entries | Software should not display main window | Ready for review | Medium | Manual |

Showing 1 to 2 of 2 entries

Previous 1 Next

Move Copy Copy (ghost steps)

Navigator - Test Specification

Settings

Update tree after every operation ☒

Filters

Test Case ID: lab3-

Test Case Title:

Test Suite: Select an Option

Platforms: Select Some Options

Status: Select Some Options

Importance: Select Some Options

Execution type: [Any]

Apply Reset Filters

Expand tree Collapse tree

- LibraryManagement (8)
 - Registration Test Suite (0)
 - Login Test Suite (2)
 - Book Entry Test Suite (2)
 - User Account Form (2)
 - Book Issue Test Suite (2)
 - Book Return Test Suite (0)

Test Project : Book Entry Test Suite

Move/Copy Test Cases

Choose a target: Registration Test Suite

☒ Copy keywords

☒ Copy Requirement Assignments

Show 25 entries

| Test Case | Summary | Status | Importance | Execution type |
|---|--|--------|------------|----------------|
| <input type="checkbox"/> lab3-3 : ADD button | The user should have filled all the fields with proper data and if there is any error then a prompt should be displayed. Else the data is added to the record. | Future | Medium | Automated |
| <input type="checkbox"/> lab3-4 : Delete button | This deletes the details of book by the ID number | Future | Medium | Automated |

Showing 1 to 2 of 2 entries

Previous 1 Next

Move Copy Copy (ghost steps)

TestLink 1.9.20 [DEV] interface showing the 'Test Project: User Account Form' configuration. The left sidebar shows a tree view of test suites under 'LibraryManagement (8)'. The main panel shows 'Move/Copy Test Cases' with a table of test cases.

| Test Case | Summary | Status | Importance | Execution type |
|---|--|--------|------------|----------------|
| <input type="checkbox"/> lab3-5 : ADD button | The user should have filled all the fields with proper data and if there is any error then a prompt should be displayed. Else the data is added to the record. | Future | Medium | Automated |
| <input type="checkbox"/> lab3-6 : Delete button | This deletes the details of book by the ID number | Future | Medium | Automated |

TestLink 1.9.20 [DEV] interface showing the 'Test Project: Book Issue Test Suite' configuration. The left sidebar shows a tree view of test suites under 'LibraryManagement (8)'. The main panel shows 'Move/Copy Test Cases' with a table of test cases.

| Test Case | Summary | Status | Importance | Execution type |
|---|--|--------|------------|----------------|
| <input type="checkbox"/> lab3-7 : ADD button | The user should have filled all the fields with proper data and if there is any error then a prompt should be displayed. Else the data is added to the record. | Future | Medium | Automated |
| <input type="checkbox"/> lab3-8 : Delete button | This deletes the details of book by the ID number | Future | Medium | Automated |

Link to the test-spec document generated:

https://drive.google.com/file/d/1u-_0dtWwrUPICER4Rx6m2LtUjky50low/view?usp=sharing

It can even be viewed at:

testspec LibraryManagement

Test Steps

The screenshot shows the TestLink 1.9.20 [DEV] interface. The left sidebar contains the 'Navigator - Test Specification' panel with filters and a tree view. The main area displays the 'Test Case' configuration for 'lab3-1: Valid entries - Version1'.

Test Case Configuration:

- Test Case ID:** lab3-1
- Test Case Title:** lab3-1: Valid entries - Version1
- Preconditions:** Enter valid name and password and click on login button
- Summary:** Software should display main window
- Step actions:**

| # | Step actions | Expected Results | Execution |
|---|------------------------------------|--------------------------------------|-----------|
| 1 | Step 1 - User enters the detail | Step 1 - pop ups for wrong entries | Manual |
| 2 | Step 2 - user presses login button | Step 2 - control shifts to main menu | Manual |
- Status:** Ready for review
- Importance:** Medium
- Execution type:** Manual

Test plan

The screenshot shows the TestLink 1.9.20 [DEV] interface for Test Plan Management. The main area displays a table of test plans.

Test Plan Management - Test Project LibraryManagement

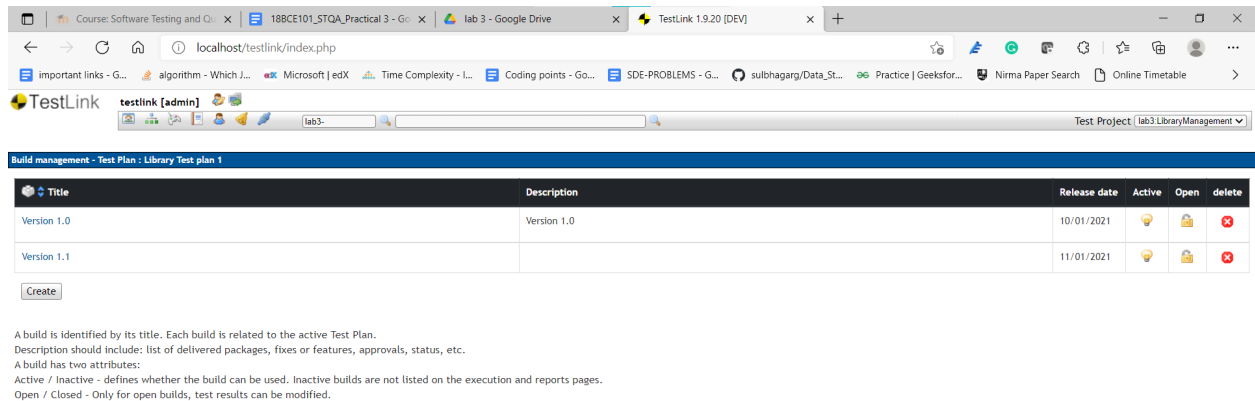
Show 20 entries

| Name | Description | Test Case # | Build # | Active | Public |
|---------------------|---------------------|-------------|---------|--------|--------|
| Library Test plan 1 | Library Test plan 1 | 0 | 0 | Active | Public |

Showing 1 to 1 of 1 entries

Previous 1 Next

Adding builds and releases:



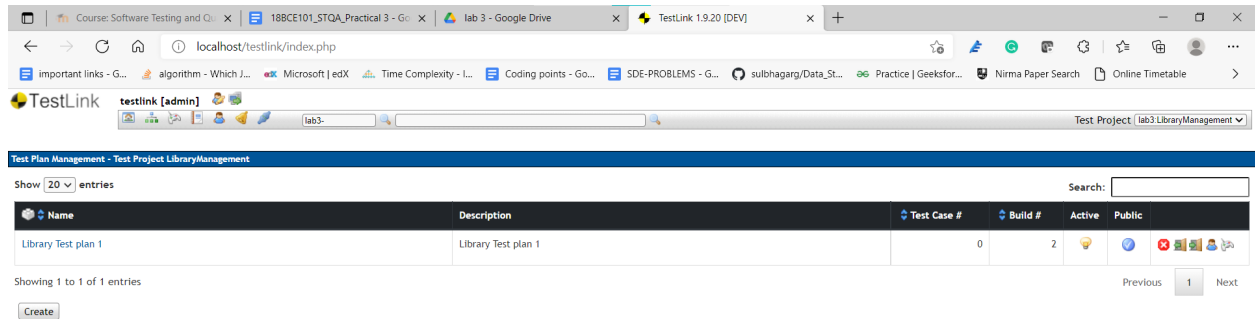
Build management - Test Plan : Library Test plan 1

| Title | Description | Release date | Active | Open | delete |
|-------------|-------------|--------------|--------|------|--------|
| Version 1.0 | Version 1.0 | 10/01/2021 | ⚡ | 🔒 | ✖ |
| Version 1.1 | | 11/01/2021 | ⚡ | 🔒 | ✖ |

Create

A build is identified by its title. Each build is related to the active Test Plan.
Description should include: list of delivered packages, fixes or features, approvals, status, etc.
A build has two attributes:
Active / Inactive - defines whether the build can be used. Inactive builds are not listed on the execution and reports pages.
Open / Closed - Only for open builds, test results can be modified.

Assigning to the user



Test Plan Management - Test Project LibraryManagement

Show 20 entries

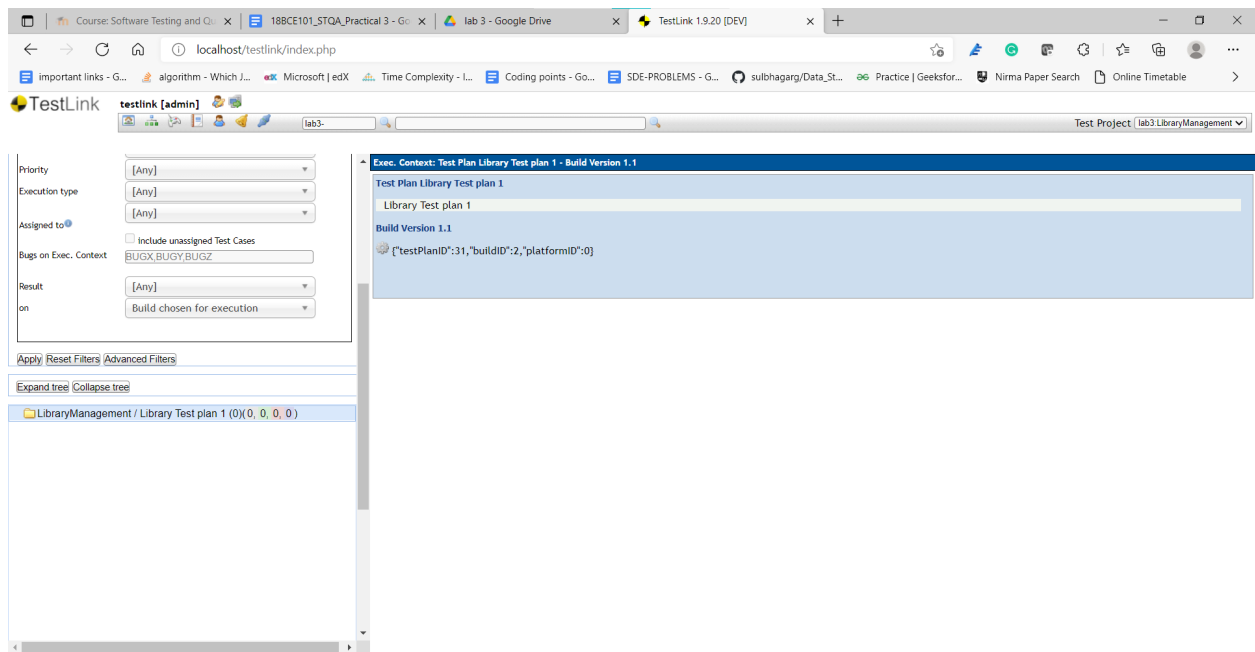
| Name | Description | Test Case # | Build # | Active | Public |
|---------------------|---------------------|-------------|---------|--------|--------|
| Library Test plan 1 | Library Test plan 1 | 0 | 2 | ⚡ | 🔒 |

Showing 1 to 1 of 1 entries

Create

Previous 1 Next

Executing



Conclusion:

TestLink is a web application; it provides a private website for individuals or a group of requesting users belonging to the same company/project.

TestLink can be run on the server-side.

TestLink is a PHP-based application, which is compatible with all operating system platforms, such as Windows, different versions of Linux, MAC, etc.

TestLink is compatible with all famous browsers, such as Chrome, IE, Mozilla, and Safari.