./

GENESIS - Shadow-project Summary Report



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ver. Rel. No.** | **Release Date** | **Prepared. By** | **Reviewed By** | **To be Approved** | **Remarks/Revision Details** |
| 1 | 09/12/2020 | Shandhiya.V.S[99002477],  MVNSK Aditya [99002471] | Sagar.K |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Details**

# Contents

[Contents 3](#_Toc58400265)

[List of Tables 3](#_Toc58400266)

[List of Figures 3](#_Toc58400267)

[Shadow Project- Manual and Automation testing of mobile applications for both Android and iOS using Serenity BDD framework [Team] 4](#_Toc58400268)

[Modules 4](#_Toc58400269)

[Topic and Subtopics 4](#_Toc58400270)

[Objectives & Requirements 4](#_Toc58400271)

[Design 5](#_Toc58400272)

[Test Plan 7](#_Toc58400273)

[Implementation Summary 13](#_Toc58400274)

[Video Summary 15](#_Toc58400275)

[Individual Contribution & Highlights 15](#_Toc58400276)

[Challenges faced and how were they overcome. 16](#_Toc58400277)

## List of Tables

[Table 1- Low and High Level Requirements 6](#_Toc58400155)

[Table 2.Individual Contributions 16](#_Toc58400156)

## List of Figures

[Figure 1.Sequence Diagram 6](#_Toc58400163)

[Figure 2.Object Diagram 7](#_Toc58400164)

[Figure 3.Eclipse IDE console output 16](#_Toc58400165)

## 

# Shadow Project-Manual and Automation testing of mobile applications for both Android and iOS using Serenity BDD framework [Team]

## Modules

Modules linked to the Shadow Project–SDLC, Java, Selenium, Serenity BDD.

## Topic and Subtopics

Core Topic:

Mobile app automation

Selenium automation using java with ECLIPSE IDE and Appium

Sub Topics:

Testing using cucumber and Serenity BDD

Creation of feature files

Run configuration – Cucumber feature

## Objectives & Requirements

Objective:

* Understanding of the tools used in mobile testing
* Configuration of the test environment and infrastructure
* Understand BDD framework
* Serenity framework development
* Integration of Appium
* Understanding of the testcase design and preparation
* Test case execution and reporting
* Integration/ system testing of the application
* Integration with CI/CD pipeline

Requirements (High level and low level):

|  |  |
| --- | --- |
| ID | Description |
| HL\_01\_L\_01 | Low level 01 – Invoke ECLIPSE IDE  High level 01 –Creation of MAVEN repository |
| HL\_02\_L\_02 | Low level 02 – Setting up executable Appium driver  High level 02 –Launching Appium application |
| HL\_03\_L\_03 | Low level 03 – Identifying required APP to automate  High level 03 – Installing corresponding app in android |
| HL\_04\_L\_04 | Low level 04– The Automated Testing System should include the following components: Selenium dependencies and JAVA environment required by the tests  High level 04 –automation and checking the functionality. |
| HL\_05\_L\_05 | 1. Low level 05 – The Automated Testing System should be invoked from BDD (cucumber framework) 2. High level 05 –Feature file creation and execution using cucumber framework. |
| HL\_06\_L\_06 | 1. Low Level 06 - The Automated Testing System should implement the tests cases for the following scenarios: Given, When, Then. 2. High Level 06 – should pass all the above scenarios. |
| HL\_07\_L\_07 | 1. Low Level 07 – Implementing Serenity BDD in cucumber 2. High Level 07 – Should pass all the steps |
| HL\_08\_L\_08 | 1. Low Level 08 - Documentation using Serenity BDD and cucumber 2. High Level 08 - Should automatically write the documentation |

Table - Low and High Level Requirements

## Design

Behavioral Diagram (Sequence Diagram)

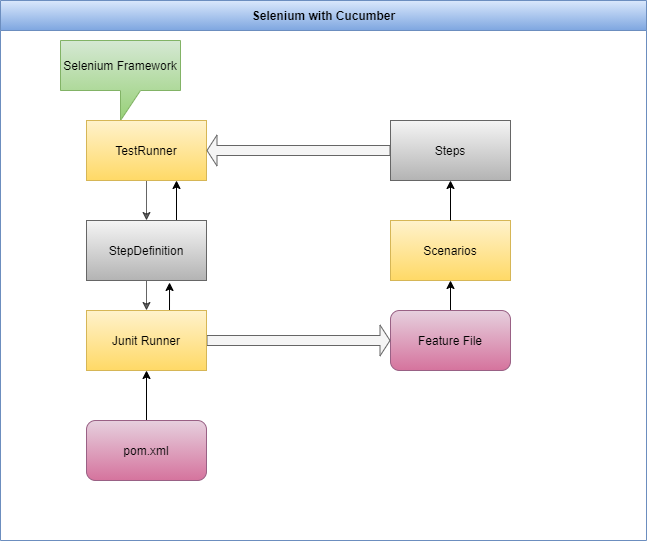


Figure 1.Sequence Diagram

Structural Diagram (Object Diagram)

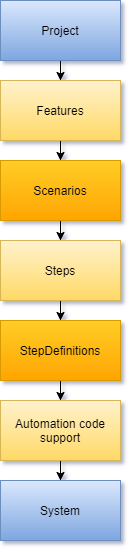


Figure 2.Object Diagram

## Test Plan

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S.No | Test case | Action | Expected Results | Results | Type of test | Test Type Category |
| 1 | TC-001-Mobile app Brightlayer Industrial app login **OK**-Verify the opening of the app | **Step 0:** Opening the app | The app should open | App should open | Functional | Mobile, Functional, Automatable |
| 2 | TC-002-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | App should open | Functional | Mobile, Functional, Automatable |
| TC-002-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the email-id | Email id must be entered in the right  format. | Funtional |  |
| TC-002-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the password | Password must be entered correctly. | Functional |  |
| TC-002-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on remember me check button | Remember me button is clicked. | Functional |  |
| TC-002-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 4:** Click on the Login button | Login button is pressed. | Functional |  |
| 3 | TC-003-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | Should not Login | Functional | Mobile,Functional, Automatable |
| TC-003-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the wrong email-id | Should not login | Funtional |
| TC-003-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the password | Password must be entered correctly. | Functional |
| TC-003-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on remember me check button | Remember me button is clicked. | Functional |
| TC-003-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 4:** Click on the Login button | Login button is pressed. | Functional |
| 4 | TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | Should not Login | Functional | Mobile,Functional, Automatable |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the wrong email-id | Email id is correctly given | Funtional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the password | Wrong password must be given. | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on remember me check button | Remember me button is clicked. | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 4:** Click on the Login button | Login button is pressed. | Functional |
| 5 | TC-005-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | App should open | Functional | Mobile,Functional, Automatable |
| TC-005-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the email-id | Email id must be entered | Funtional |
| TC-005-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the password | Password must be entered | Functional |
| TC-005-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Uncheck on remember me check button | Remember me button is clicked | Functional |
| TC-005-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 4:** Click on the Login button | Login button is pressed | Functional |
| 6 |  | **Step 0:** Click on forgot password | Forgot password is clicked |  |  | Mobile,Functional Automatable |
| TC-006-Mobile app Brightlayer Indusrial app login OK-Verify the login of the app | **Step 1:** Enter the email id | Email id must be entered | Email is entered | Functional |
| TC-006-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | Step 2: Click on Reset password button | Reset password button is clicked | Reset password  is clicked | Functional |
| 7 | Tc-007-Mobile app Brightlayer Indusrial app login **OK**- Verify the contact us button | Step 0: Click on Contact us button | Contact us button is clicked |  |  | Mobile,Functional, |
| Tc-007-Mobile app Brightlayer Indusrial app login OK- Verify the contact us button | Step 1: Click on the phone number | Phone number is clicked  and call is initiated | Phone number is clicked and the call  initiateed | Functional |
| 8 | TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | Should Login | Functional | Mobile,Functional, Automatable |
|  | **Step 1:** Entering the correct email id | Email id is correctly given |  | Funtional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the password | Correct password must be given. |  | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on remember me check button | Remember me button is clicked. |  | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 4:** Click on the Login button | Login button is pressed. |  | Functional |
| 9 | TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | Should not Login | Functional | Mobile,Functional, Automatable |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the wrong email id | Email id is given | Functional |
|  | **Step 2:** Entering the wrong password | Password must be given. | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on remember me check button | Remember me button is clicked. |  | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 4:** Click on the Login button | Login button is pressed. | Functional |
| 10 | TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | App should not open | Functional | Mobile,Functional, Automatable |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the wrong email id | Email id is given | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the wrong password | Password must be given. | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on the Login button | Login button is pressed. | Functional |  |
| 11 | TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | App should not open | Functional | Mobile,Functional, Automatable |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the wrong email id | Email id is given | Funtional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the Correct password | Password must be given. | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on the Login button | Login button is pressed. | Functional |
| 12 | TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | App should not open | Functional | Mobile, Functional, Automatable |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the Correct email id | Email id is given |  | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the wrong password | Password must be given. | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on the Login button | Login button is pressed. | Functional |
| 13 | TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 0:** Opening the app | The app should open | App should open | Functional | Mobile, Functional, Automatable |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 1:** Entering the Correct email id | Email id is given | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 2:** Entering the correct password | Password must be given. | Functional |
| TC-004-Mobile app Brightlayer Indusrial app login **OK**-Verify the login of the app | **Step 3:** Click on the Login button | Login button is pressed. |  | Functional |

## Implementation Summary

Automated a web page using Selenium testing tool with JAVA to check all the page functionalities. Also incorporated Behavioral Driven Development (BDD) testing with cucumber framework. The following scenarios were tested using cucumber tags:

Feature: I want to test the app  
 I want to use this to test the app

Scenario Outline: Login Functionality (App Should not login)

Given I want to open the app

When I want to enter the <emailid>

And I want to enter the <password>

And I want to click on login button

Examples:  
|emailid|password|  
|aditya.mallu1@gmail.com|Aditya@123|  
|aditya.mallu1@gmail.com|Aditya@234555|  
|test@123|Test@12345|

Scenario Outline: Login Functionality 2(App should not login)

Given I want to open the app

When I want to enter the <emailid>

And I want to enter the <password>

And I want to click on login button

Examples:  
|emailid|password|  
|aditya.mallu1@gmail.com|Aditya@123|  
|aditya.sharma123@gmail.com|1234456@123|

Scenario Outline Login Functionality 3(App Should login)

Given I want to open the app

When I want to enter the <emailid>

And I want to enter the <password>

And I want to click on login button

Examples:  
|emailid|password|  
|aditya.mallu1@gmail.com|Aditya@123|  
|aditya.mallu1@gmail.com|Aditya@234555|  
|test@123|Test@12345|

Scenario Outline: Login Functionality 3(App Should login)

Given I want to open the app

When I want to enter the <emailid>

And I want to enter the <password>

And I want to click on login button

Examples:  
|emailid|password|  
|emailid|password|  
|testorg10automationuser@mailinator.com|Pass@123|

Output:

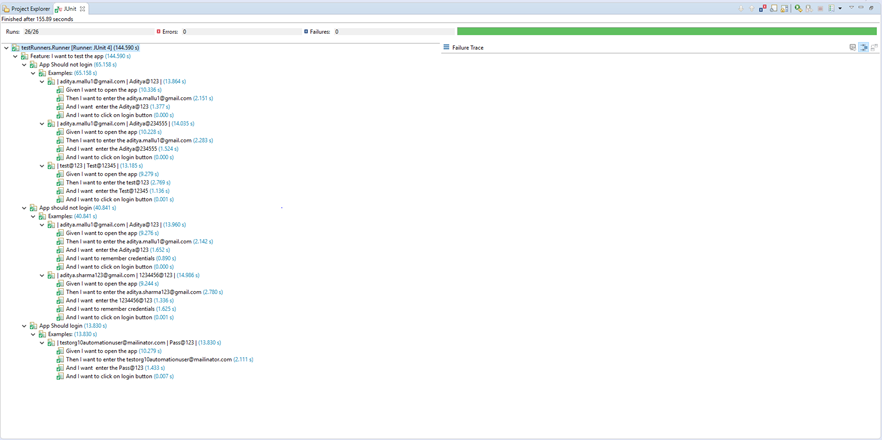


Figure 3.Eclipse IDE console output

### Video Summary

This video is a walk-through of the automation and the various functionalities that are implemented on our project. It is followed by execution of feature file indicating BDD testing and test cases passing with cucumber framework along with Serenity framework. Link to the video

[SharePoint-Video Link](https://lnttsgroup.sharepoint.com/sites/GEA/Global%20Engineering%20Academy/GEA%20Insights/Genesis/Shared%20Documents/Forms/AllItems.aspx?ct=1605695830818&or=OWA%2DNT&cid=db4a184c%2D9bbd%2Dad97%2D7b17%2Dc15c7ee7a4cf&originalPath=aHR0cHM6Ly9sbnR0c2dyb3VwLnNoYXJlcG9pbnQuY29tLzpmOi9zL0dFQS9HbG9iYWwlMjBFbmdpbmVlcmluZyUyMEFjYWRlbXkvR0VBJTIwSW5zaWdodHMvR2VuZXNpcy9FaHc3Xy1JZ0ZlOUpzVFBSYUFNZldkVUJjdDFodHJwYXNQZUtRdmVLRDhDM2V3P3J0aW1lPV9XdXQ4ZlNiMkVn&viewid=cc51c267%2D8a4d%2D4268%2Db332%2D67a53fd6dfde&id=%2Fsites%2FGEA%2FGlobal%20Engineering%20Academy%2FGEA%20Insights%2FGenesis%2FShared%20Documents%2FSubmission%2FMYSORE%2F2009MYSEMB%2FSpecialization%2F2009MYSEMB03%2FShadow%20Project%20Track%203%2FManual%20and%20Automation%20testing%20of%20mobile%20applications%20for%20both%20Android%20and%20iOS)

## Individual Contribution & Highlights

|  |  |  |
| --- | --- | --- |
| S.No | Name | Contributions |
| 1 | Shandhiya V S (99002477) | Done with the BDD testing of automated page with cucumber framework.  Documentation of report. |
| 2 | M V N S K Aditya (99002471 | Done with the BDD testing of automated page with cucumber framework.  Documentation of ppt. |

Table .Individual Contributions

## Challenges faced and how were they overcome.

Challenge 1: Timeout and sync issue.

Solution: This can be avoided by including delay i.e., Thread. Sleep ().

Challenge 2: App Loading.

Solution: Certain Apps are user specific and load different elements depending upon the previous activity of the user. It can be overcome by giving commands like explicit waits and giving enough time to load.

Challenge 3: Difficulty in automating certain elements

Solution: Tried automating with the help of relative Xpath even though 100% automation was not possible.

### 