

LITHAN

Plan, Design, Develop, and Test Report Application

Module Project

Module: NICF-Application Implementation (SF)

Course:

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Document History

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Version Number	Effective Date of release	Summary of Included Changes	Author
1	4 th March 2016	First Edition	Satya CVS
2	23 rd Jul 2018	Changed for Module 6	Shrinivas K R

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1. Different Types of Testing

☐ List types of Testing

- Unit testing
- UAT testing
- Integration testing
- Beta testing
- Black box testing
- White box testing
- Usability testing
- Load testing
- Security testing

2. How Different Test Helps

☐ Write briefly on how different tests helps

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Unit testing	Integration testing
In unit testing each module of the software is tested separately.	In integration testing all modules of the software are tested combined.
Unit testing is performed first of all testing processes.	Integration testing is performed after unit testing and before system testing.
Unit testing is a white box testing.	Integration testing is a black box testing.
Detection of defects in unit testing is easy.	Detection of defects in integration testing is difficult

2. How Different Test Helps

UAT testing

UAT is done in a controlled environment

UAT is usually done by the client

UAT often involves working alongside the testing and/or development team

Beta testing

Beta testing is done in the wild.

Beta testing is done by the end user.

Beta testing is done by the end user alone.

Black-box testing

The Black Box Test is a test that only considers the external behavior of the system; the internal workings of the software is not taken into account.

Black Box Test is not considered for algorithm testing.

It is the least time consuming.

This method is used in System Testing or Acceptance Testing. This method is used in Unit Testing or Integration Testing.

White-box testing

The White Box Test is a method used to test a software taking into consideration its internal functioning.

White Box Test is well suitable for algorithm testing.

It is most time consuming

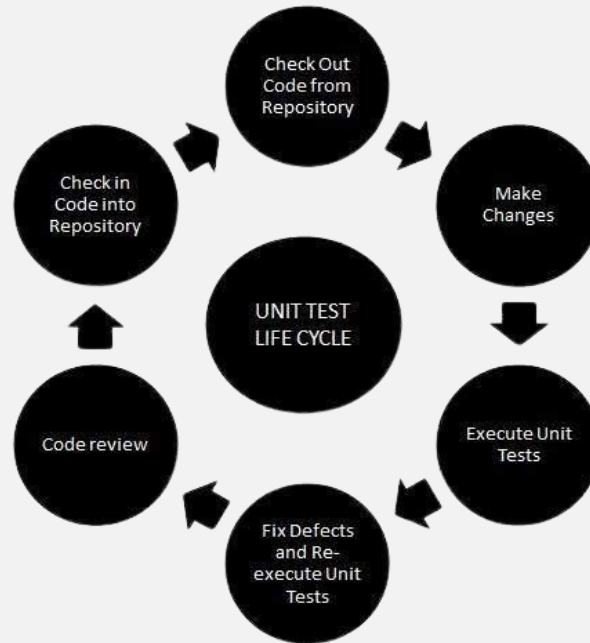
This method is used in System Testing or Acceptance Testing. This method is used in Unit Testing or Integration Testing.

3. Tests Selected

❑ Functional Testing

- **Unit Testing**

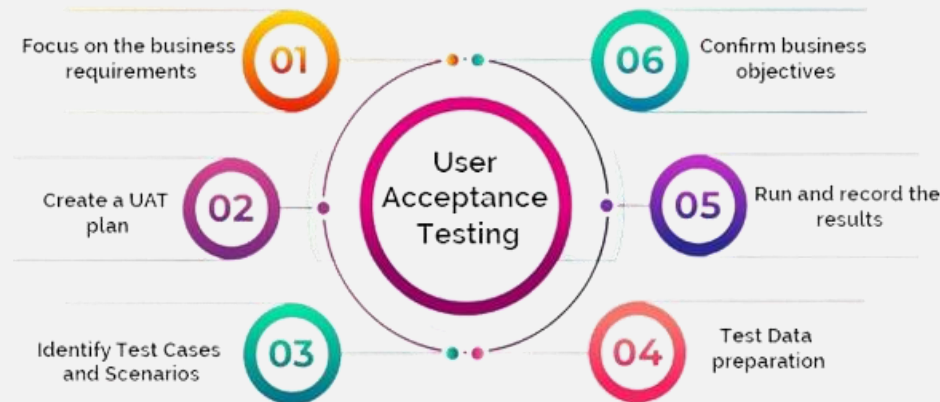
Unit testing is a [software](#) development process in which the smallest testable parts of an [application](#), called units, are individually and independently scrutinized for proper operation. This testing methodology is done during the development process by the software developers and sometimes QA staff. The main objective of unit testing is to isolate written code to test and determine if it works as intended.



3. Tests Selected

- **UAT Testing**

UAT (User Acceptance Testing) is a type of testing performed by the end-user or the client to verify the software system before moving the software application to the production environment. UAT is done in the final phase of testing after functional, integration, and system testing is done



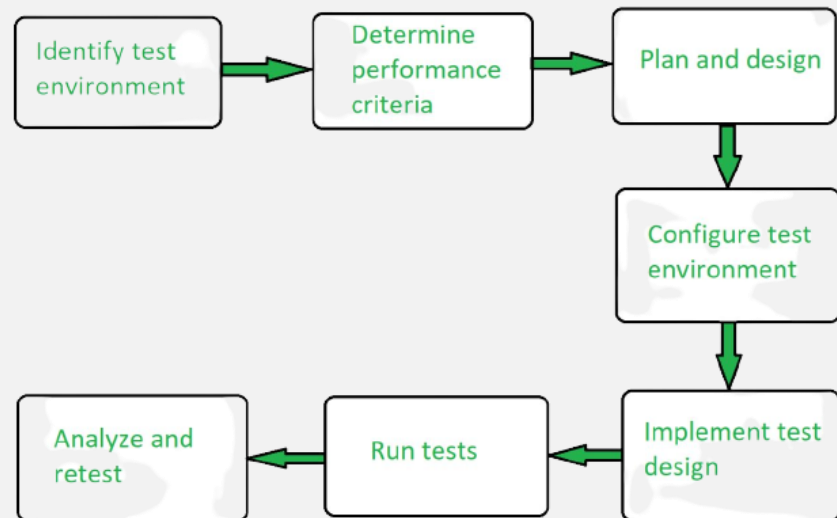
3. Tests Selected

❑ Non-Functional Testing

• Performance Testing

Overall performance testing is a form of software testing that guarantees software packages perform well underneath their anticipated workload. it's miles a trying out technique completed to determine device overall performance in phrases of sensitivity, reactivity, and balance under a particular workload.

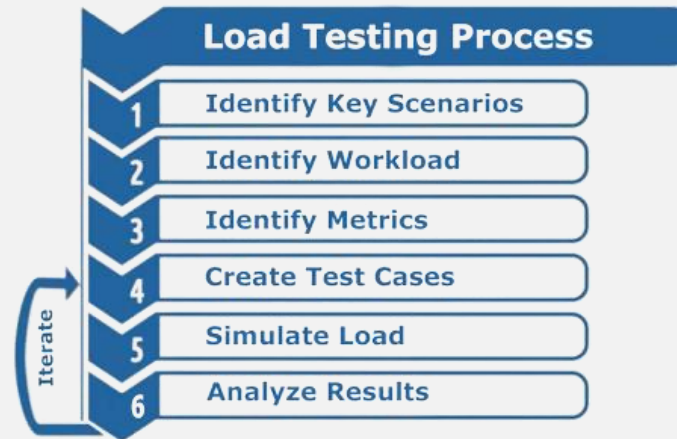
performance testing is the procedure of studying the fine and capability of a product. it's far a checking out method carried out to determine the system performance in phrases of pace, reliability, and stability under varying workloads. overall performance trying out is also called Perf testing.



3. Tests Selected

- **Load Testing**

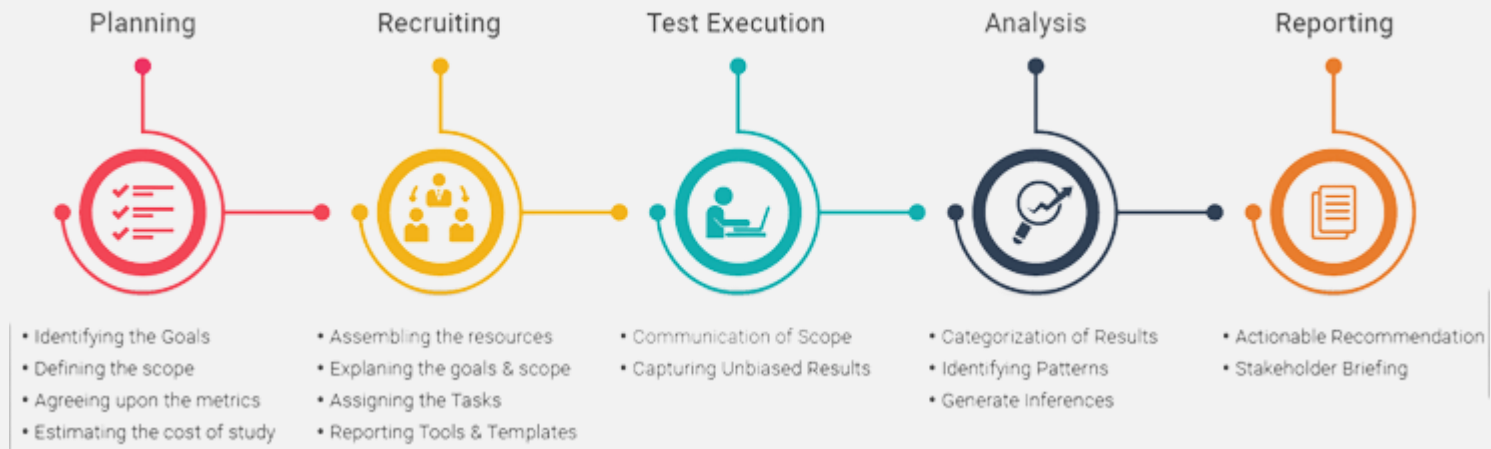
Load testing is a sort of performance testing that determines the overall performance of a device, software product, or software utility below actual life primarily based on load conditions. basically, load testing determines the behavior of the utility while multiple users use it at the identical time. It is the reaction of the system measured under various load conditions. The burden testing is finished for regular and severe load conditions



3. Tests Selected

■ Usability Testing

Usability testing additionally called user to enjoy(UX) trying out, is a testing method for measuring how easy and user-friendly a software program application is. A small set of goal quit-users, use software to show usability defects. Usability testing mainly specializes in a person's ease of the use of software, flexibility of utility to address controls, and potential of application to fulfil its goals.



4. Test Schedule

☐ Create an optimal test schedule

Web page	Weighting	Functional Points (FP)	Total
Registration	3	5	15
Login	3	4	12
Search users	3	4	12
View profile	2	3	6
Update profile	3	5	15
Forget password	2	4	8
		Total functional points	68
		Estimated person hour per FP	2.0
		Total hours needed	$68 \times 2 = 136$
		Total days needed	$136 / 8 = 17$ days

4. Test Schedule

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☐ Test Schedule

Test Schedule ID :	TS001		
Product ID / Name :	ABC Community Portal		
Product Version or Build:	1.0		
Present Owner :	ABC PVT LTD		
Created On :	09/01/2022		
Review On :	09/23/2022		
Review By :	Chathu	QA Manager	
Review Comments :	Good		
Current Version :	1.0		
Change Details :	Not Available		
Current Status :	Approved		
Signing Off Authority :	Kevin, Leo, Kara	Software Developer, QA Manager, Client	10/07/2022

4. Test Schedule

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☐ Test Plan

No	Task	Start	End	Person Days	Resource
1	Prepare Test Plan	09/01/2022	09/01/2022	1	Test manager QA manager Developer/Designer
2	Define metrics	08/19/2022	08/26/2022	7	Test manager QA manager Developer/Designer
3	Review plan	08/29/2022	08/31/2022	2	Test manager QA manager
4	Prepare Test Scripts	09/01/2022	09/01/2022	1	Test manager QA manager Developer/Designer
5	Review Test Scripts	09/02/2022	09/05/2022	3	Test manager QA manager Developer/Designer
6	Set up Test Environment	09/06/2022	09/09/2022	3	Test manager Developer/Designer
7	Execute Testing/Record Faults	09/10/2022	09/13/2022	3	Test manager QA manager Developer/Designer
8	Re-execute Test as Needed	09/14/2022	09/17/2022	3	Test manager QA manager Developer/Designer
9	Document the test results	09/17/2022	09/20/2022	3	Test manager QA manager Developer/Designer
10	Review Document	09/20/2022	09/23/2022	3	Test manager QA manager

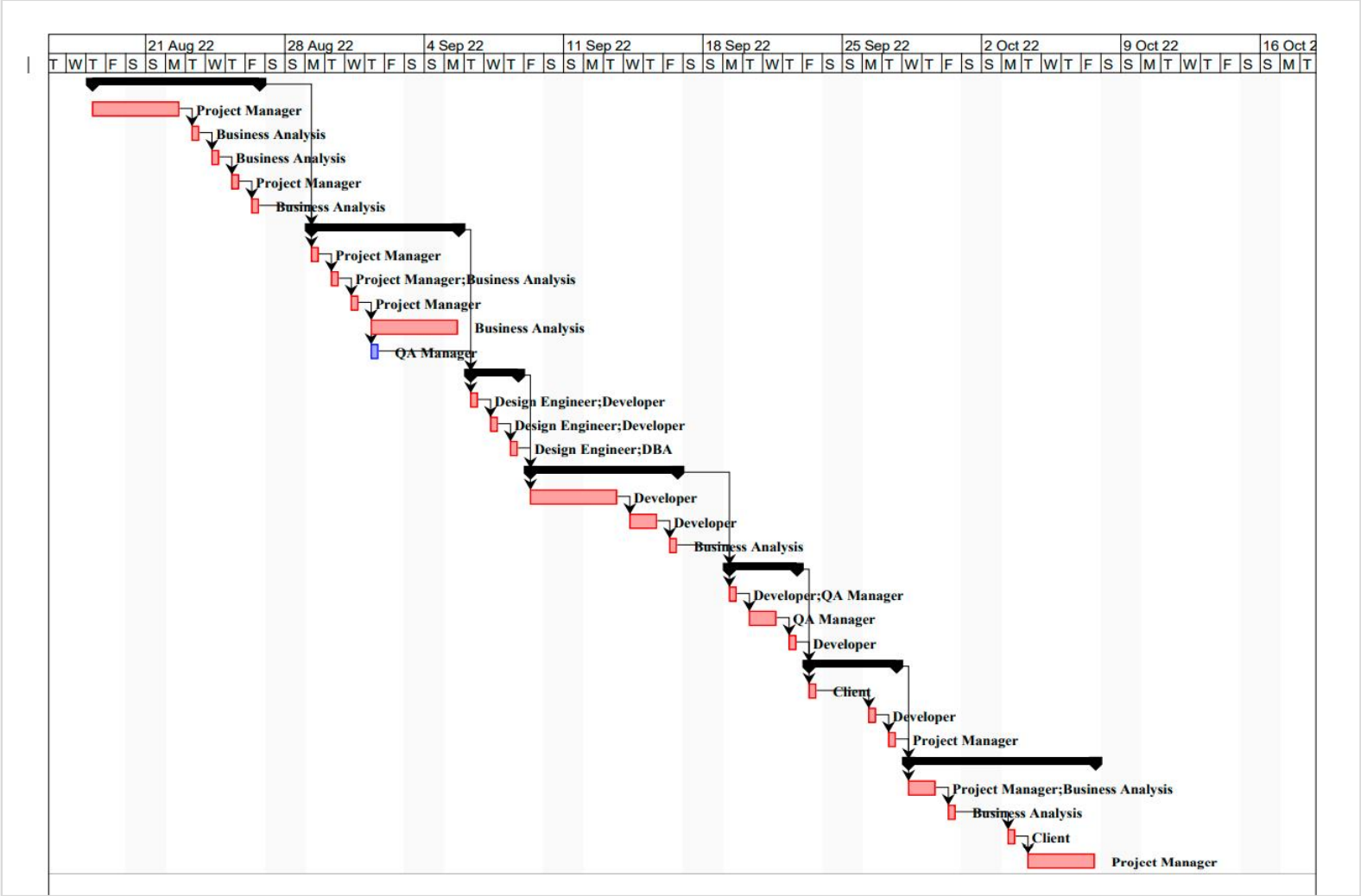
4. Test Schedule

❑ Spread Sheat

		Name	Duration	Start	Finish	Predecessors	Resource Names	M
1		Requirement Gathering	7 days	8/18/22 8:00 AM	8/26/22 5:00 PM			
2		Kickoff Meetings	3 days	8/18/22 8:00 AM	8/22/22 5:00 PM		Project Manager	
3		Identify Stackholders	1 day	8/23/22 8:00 AM	8/23/22 5:00 PM	2	Business Analysis	
4		Gather and Documentation	1 day	8/24/22 8:00 AM	8/24/22 5:00 PM	3	Business Analysis	
5		Set the Objective	1 day	8/25/22 8:00 AM	8/25/22 5:00 PM	4	Project Manager	
6		Prepare SRS Document	1 day	8/26/22 8:00 AM	8/26/22 5:00 PM	5	Business Analysis	
7		Planning	6 days	8/29/22 8:00 AM	9/5/22 5:00 PM	1		
8		Document the Scope	1 day	8/29/22 8:00 AM	8/29/22 5:00 PM	6	Project Manager	
9		Cost Estimation	1 day	8/30/22 8:00 AM	8/30/22 5:00 PM	8	Project Manager;Business Analysis	
10		Allocating Resources	1 day	8/31/22 8:00 AM	8/31/22 5:00 PM	9	Project Manager	
11		Risk Planning	3 days	9/1/22 8:00 AM	9/5/22 5:00 PM	10	Business Analysis	
12		Test Planning	1 day	9/1/22 8:00 AM	9/1/22 5:00 PM	10	QA Manager	
13		Design	3 days	9/6/22 8:00 AM	9/8/22 5:00 PM	7		
14		Prepare Technical Design	1 day	9/6/22 8:00 AM	9/6/22 5:00 PM	12	Design Engineer;Developer	
15		Prepare Prototype	1 day	9/7/22 8:00 AM	9/7/22 5:00 PM	14	Design Engineer;Developer	
16		Design Database	1 day	9/8/22 8:00 AM	9/8/22 5:00 PM	15	Design Engineer;DBA	
17		Implementation	6 days	9/9/22 8:00 AM	9/16/22 5:00 PM	13		
18		Coding the Source Code	3 days	9/9/22 8:00 AM	9/13/22 5:00 PM	16	Developer	
19		Implement the database	2 days	9/14/22 8:00 AM	9/15/22 5:00 PM	18	Developer	
20		Prepare Business Logics	1 day	9/16/22 8:00 AM	9/16/22 5:00 PM	19	Business Analysis	
21		Testing	4 days	9/19/22 8:00 AM	9/22/22 5:00 PM	17		
22		Conduct Unit Testing	1 day	9/19/22 8:00 AM	9/19/22 5:00 PM	20	Developer;QA Manager	
23		Conduct Integration Test	2 days	9/20/22 8:00 AM	9/21/22 5:00 PM	22	QA Manager	
24		Fix the erros	1 day	9/22/22 8:00 AM	9/22/22 5:00 PM	23	Developer	
25		Deployment	3 days	9/23/22 8:00 AM	9/27/22 5:00 PM	21		
26		UAT Testing	1 day	9/23/22 8:00 AM	9/23/22 5:00 PM	24	Client	
27		Fix errors	1 day	9/26/22 8:00 AM	9/26/22 5:00 PM	26	Developer	
28		Deploy the website	1 day	9/27/22 8:00 AM	9/27/22 5:00 PM	27	Project Manager	
29		Maintenance	8 days	9/28/22 8:00 AM	10/7/22 5:00 PM	25		
30		Release the user guide Document	2 days	9/28/22 8:00 AM	9/29/22 5:00 PM	28	Project Manager;Business Analysis	
31		Provide post deployment	1 day	9/30/22 8:00 AM	9/30/22 5:00 PM	30	Business Analysis	
32		Service level agreement	1 day	10/3/22 8:00 AM	10/3/22 5:00 PM	31	Client	
33		Complete Project	4 days	10/4/22 8:00 AM	10/7/22 5:00 PM	32	Project Manager	

4. Test Schedule

Gantt Chart



5. Test Results

UNIT and UAT Test Scripts

1] Test Scenario: -

Requirements	Test Scenario ID	Test Scenario	Number of test cases
Functional Testing	TS001-Unit testing	Ensure that user enters correct data in the registration page	3
	TS002-UAT testing	Check that a hyperlink is provided on each page and is consistent.	1
	TS003-Unit testing	Ensure that user enters correct data in the login page	4
	TS004-UAT testing	Check that a hyperlink is provided on each page and is consistent.	1
	TS005-UAT testing	Check that a logout navigation in community portal home page	1
	TS006-Unit testing	Ensure that user enters correct data in the forget password page	5

Scenario -1:- Unit Testing (Registration Page)

Test Scenario	Ensure that the user enters the correct data on the registration page
TS001	
Test Cases	Unit Testing
TC001	You need to create test case for check the mandatory fields validation without filling all the fields.
TC002	Check the name validation working correctly
TC003	Check the Email validation working correctly
TC004	Check the Phone number validation working correctly
TC005	Check the Password validation working correctly
TC006	Check that the Password and repeat password are the same

5. Test Results

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Scenario ID	Test Case ID	Test Case	Preconditions	Test Step	Test Data	Expected Results	Actual Results	Pass / Fail
TS001	TC001	Test Case 1	The user should have the URL of the website and open a homepage of the abcjobs.com	<ul style="list-style-type: none"> Type URL Click "Sign up" on the website home page linked to the registration page. Enter all the fields. Click submit. 	Full Name: Chathushi Jayarathna Email Address: chathushi77@gmail.com Phone Number: 0742269976 Select Gender: Female Password: 1234 Repeat Password: 12344444	The user should land on the Registration page	As expected,	Pass
TS001	TC002	Test case 2	The user should have the URL of the website and open a homepage of the abcjobs.com	<ul style="list-style-type: none"> Type URL Click "Sign up" on the website home page linked to the registration page. Enter all details except the name Click submit. 	Full Name: Email Address: chathushi77@gmail.com Phone Number: 0742269976 Select Gender: Female Password: 1234 Repeat Password: 1234	It will Display an error message "Name is required"	As expected,	pass
TS001	TC003	Test case 3	The user should have the URL of the website and open a homepage of the abcjobs.com	<ul style="list-style-type: none"> Type URL Click "Sign up" on the website home page linked to the registration page. 	Full Name: Chathushi Jayarathna Email Address: Phone Number: 0742269976 Select Gender: Female Password: 1234 Repeat Password: 1234	It will Display an error message "Email is Required"	As expected,	pass

5. Test Results

Scenario 2 – UAT Testing (Registration Page)

Test Scenario	Check that a hyperlink is provided on the page and is consistent.
TS002	
Test Cases	UAT Testing
UAT01	Check each sign in the hyperlink is loading the correct page

Scenario ID	Test Case ID	Test Case	Preconditions	Test Step	Test Data	Expected Results	Actual Results	Pass / Fail
TS002	UAT01	Check hyperlink menu is loading the correct page	The website is configured to Microsoft Edge by Apache Tomcat Server.	1. Go to Microsoft Edge. 2. Type www.abcj obs.com and enter.	Click on the Signup link	The Registration Page is Loaded	As expected,	Pass

5. Test Results

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Scenario 3:- Unit Testing (Login Page)

Test Scenario	Ensure that the user enters the correct data on the Login page
TS003	
Test Cases	Unit Testing
TC001	Check all the mandatory fields are entered
TC002	Check the Email validation working correctly
TC003	Check the Password validation working correctly
TC004	Check whether the Username name is correct or not
TC005	Check whether the password is correct or not

5. Test Results

Scenario ID	Test Case ID	Test Case	Preconditions	Test Step	Test Data	Expected Results	Actual Results	Pass / Fail
TS003	TC001	Test Case 1	The user should have the URL of the website and open a homepage of the abcjobs.com Register successfully	❖ Type URL ❖ Click "Login" on the website home page linked to the Login page. ❖ Enter all the fields. ❖ Click Login.	Email: chathushi77@gmail.com Password:1234	The user should land on the user profile page	As expected,	Pass
TS003	TC002	Test case 2	The user should have the URL of the website and open a homepage of the abcjobs.com Register Successfully	❖ Type URL ❖ Click "Login" on the website home page linked to the Login page. ❖ Enter all the fields without email ❖ Click Login.	Email: Password:1234	It will Display an error message "Email is required"	As expected,	Pass
TS003	TC003	Test case 3	The user should have the URL of the website and open a homepage of the abcjobs.com Register Successfully	❖ Type URL ❖ Click "Login" on the website home page linked to the Login page. ❖ Enter all the fields except the password ❖ Click Login.	Email: chathushi77gmail.com Password:	It will Display an error message "Password is required"	As expected,	pass
TS003	TC004	Test case 4	The user should have the URL of the website and open a homepage of the abcjobs.com Register Successfully	❖ Type URL ❖ Click "Login" on the website home page linked to the Login page. ❖ Enter wrong email address ❖ Click Login.	Email:dil678@gmail.com Password:1234	It will Display an error message "Enter Correct Email or Password"	As expected,	Pass
				❖ Type URL		It will Display an		

5. Test Results

Scenario -4 :- UAT Testing (Login Page)

Test Scenario	Check that a hyperlink is provided on the page and is consistent.
TS004	
Test Cases	UAT Testing
UAT01	Check log out hyperlink is loading the correct page

Scenario ID	Test Case ID	Test Case	Preconditions	Test Step	Test Data	Expected Results	Actual Results	Pass / Fail
TS004	UAT01	Check hyperlink menu is loading the correct page	The website is configured to Microsoft Edge by Apache Tomcat Server.	1. Go to Microsoft Edge. 2. Type www.abcj obs.com and enter.	Click on the Login link	The Login Page is Loaded	As expected,	Pass

5. Test Results

Scenario 5:- Unit Testing (Forgot Password Page)

Test Scenario	Ensure that the user enters the correct data in the Forgot Password page
TS005	
Test Cases	Unit Testing
TC001	Check all the mandatory fields are entered

Scenario ID	Test Case ID	Test Case	Preconditions	Test Step	Test Data	Expected Results	Actual Results	Pass / Fail
TS005	TC001	Test Case 1	<p>The user should have the URL of the website and open a homepage of the abcjobs.com</p> <p>Register Successfully</p>	<ul style="list-style-type: none"> ❖ Type URL ❖ Click "Login" on the website home page linked to the Login page. ❖ Click "Forgot Password" on the Login Form ❖ Enter Email Address ❖ Click Reset Password 	Email: chathushi77@gmail.com	The user should land on the verification page	As expected,	Pass

5. Test Results

Scenario 6: UAT Testing (Forgot Password Page)

Test Scenario	Ensure that the user enters the correct data on the registration page
TS006	
Test Cases	Unit Testing
UAT01	Check Email validations working correctly
UAT02	Check Entered email is correct or not

Scenario ID	Test Case ID	Test Case	Preconditions	Test Step	Test Data	Expected Results	Actual Results	Pass / Fail
TS006	UAT01	Test Case 1	The user should have the URL of the website and open a homepage of the abcjobs.com Register Successfully	<ul style="list-style-type: none"> Type URL Click "Login" on the website home page linked to the Login page. Click "Forgot Password" on the Login Form 	Email:	It will Display an error message "Email is Required"	As expected,	Pass
TS006	UAT02	Test Case 2	The user should have the URL of the website and open a homepage of the abcjobs.com Register Successfully	<ul style="list-style-type: none"> Type URL Click "Login" on the website home page linked to the Login page. Click "Forgot Password" on the Login Form Enter the wrong Email address 	Email:dil678@gmail.com	It will Display an error message "Incorrect Email Address"	As expected,	Pass

6. Testing Tools

☐ Testing Tools

- Selenium
- Watir
- Tosca Testsuite
- Telerik TestStudio
- Katalon Studio

7. Project Milestones & Tasks

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Project Task ID	Project Task Description	Project Milestone ID
1	Analyze and suggest choice of Test Methods	1
2	Schedule the Test Optimally	1
3	Develop the Phase Test Plan	1
5	Develop Test Cases & Scripts	2
6	Execute the Tests & Document the results	3

8. Milestone Feedback & Action taken

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Project Milestone ID	Milestone Feedback received from Tutor / Learning Facilitator	Action Taken (Yes / No)
1	Create project plan	Yes
2		
	Create gantt table	Yes
	Create gantt chart	Yes
3		
	Create project report	Yes
	Create project presantation	yes

- Validate a change that was useful to the users
- Validate a change meets non-functional requirements
- Update a test plan
- Get the most out of test management tool

11. Proposed Improvements

☐ List of Improvements

- Add more test cases
- Do all testing taking time

1. State 2 different types of testing, how they will help to create a better system. (K1)
2. Propose relevant tests suitable for the Project Scenario (K2)
3. Explain in 2 statements on optimal scheduling times for different tests (K3)
4. Mention 2 critical components of phase test plan (K4)
5. Explain 2 different means for executing test scripts (K5)