SENG 275

SOFTWARE TESTING

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REQUEST TRACEABILITY MATRIX

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What is Traceability Matrix? (TM)

- A Traceability Matrix is a document that co-relates any two-baseline documents that require a many-to-many relationship to check the completeness of the relationship.

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What is Requirement Traceability Matrix?

- Requirement document captures all requirements proposed by the client.

- **Requirement Traceability Matrix (RTM)** is a document that maps and traces user requirement with test cases.

- The main purpose of Requirement Traceability Matrix is to validate that all requirements are checked via test cases such that no functionality is unchecked during Software testing.

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Sample RTM

Req No	Req Desc	Testcase ID	Status
123	Login to the application	TC01,TC02,TC03	TC01-Pass TC02-Pass
345	Ticket Creation	TC04,TC05,TC06, TC07,TC08,TC09 TC010	TC04-Pass TC05-Pass TC06-Pass TC06-Fail TC07-No Run
456	Search Ticket	TC011,TC012, TC013,TC014	TC011-Pass TC012-Fail TC013-Pass TC014-No Run

Requirement traceability matrix can:

- Show the requirement coverage, Design status as well as execution status for the specific test case
- If there is any User Acceptance test to be done by the users, then UAT status can also be captured in the same matrix.
- The related defects and the current state can also be mentioned in the same matrix.

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Advantage of Requirement Traceability Matrix

- It confirms **100% test coverage**

- It highlights any **requirements missing** or document inconsistencies

- It shows the **overall defects or execution status** with a focus on business requirements

- It helps in analyzing or estimating the impact on the QA team's work with respect to **revisiting or re-working on the test cases**

BRD for a Demo Bank

BR#	Module Name	Applicable Roles	Description
B1	Login and Logout	Manager Customer	**Customer:** A customer can login using the login page **Manager:** A manager can login using the login page of customer. Post Login homepage will show different links based on role
B2	Balance Enquiry	Manager Customer	**Customer:** A customer can have multiple bank accounts. He can view balance of his accounts only **Manager:** A manager can view balance of all the customers who come under his supervision
B3	Fund Transfer	Manager Customer	**Customer:** A customer can have transfer funds from his "own" account to any destination account. **Manager:** A manager can transfer funds from any source bank account to destination account

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Test Case Document

Test Scenario	Test Case ID	Test Case Title	Pre-requisites	Test Steps	Test Data	Expected Result (ER)	Actual Result	Priority	Result	Comments
(TS_001) Login Functionality	TC_LF_001	Verify the Login functionality for an existing Customer.	1. Open the Application URL in any supported browser	1. Enter the valid Account number and password for an existing customer 2. Click on the Login button	Account number: 4325 Password:1234	1. Customer should be able to Log in and should be navigated to his accounts page.	1. Customer was able to Log in and was navigated to his accounts page.	P1	PASS	
	TC_LF_002	Verify the Login functionality for a Manager.	1. Open the Application URL in any supported browser	1. Enter the valid Account number and password for a Manager 2. Click on the Login button	Account number: 1987 Password:4576	1. Manager should be able to Log in and should be navigated to his accounts page. 2. He should be able to login to the account of any customer and also to his own account.	1. Manager was able to Log in and was navigated to his accounts page. 2. He was able to login to the account of any customer and also to his own account.	P1	PASS	
(TS_001) Balance Enquiry Functionality	TC_BE_001	Verify Balance Enquiry functionality for Customer	1. Customer should be logged in with valid credentials 2. Customer should have navigated to the 'Balance Enquiry' page	1. Click on the 'Check Balance' button	Not Applicable	1.Customer should be able to check balance of his own account(one or multiple)	1.Customer was be able to check balance of his own account(one or multiple)	P2	PASS	
	TC_BE_002	Verify Balance Enquiry functionality for Manager	1. Manager should be logged in with valid credentials 2. Manager should have navigated to the 'Balance Enquiry' page	1. Click on the 'Check Balance' button	Not Applicable	1.Manager should be able to check balance of his own account(one or multiple) or any Customer's account(one or multiple)	1.Manager was able to check balance of his own account(one or multiple) or any Customer's account(one or multiple)	P2	PASS	
(TS_001) Fund Transfer Functionality	TC_FT_001	Verify Fund Transfer functionality for Customer	1. Customer should be logged in with valid credentials 2. Customer should have navigated to the 'Fund Transfer' page	1. Click on 'Fund Transfer' button. 2. Give destination account details and amount of funds to be transferred.	1. Account details, funds for destination account: AcNo:1234 Funds:5000CAD	1. Customer should be able to transfer funds from his own account to any destination account.	1. Customer was able to transfer funds from his own account to any destination account.	P2	PASS	
	TC_FT_002	Verify Fund Transfer functionality for Manager	1. Manager should be logged in with valid credentials 2. Manager should have navigated to the 'Fund Transfer' page	1. Click on 'Fund Transfer' button. 2. Give destination account details and amount of funds to be transferred.	1. Account details, funds for destination account: AcNo:4563 Funds:2900CAD	1. Manager should be able to transfer funds from any source bank account to destination account	1. Manager was able to transfer funds from any source bank account to destination account	P2	FAIL	Failed due to defect TD_001. Manager was not given required authorization.

RTM for demo bank

REQUIREMENTS TRACEABILITY MATRIX

Project Name:	Demo Bank		
Prepared By:	Navneet Popli(Test Lead)		
Reviewer/Approver	D.Michael (PO)		

Requirement ID	Requirement Description	Test Case ID	Status
B1	Login to the application	TC_LF_001, TC_LF_002	TC_LF_001:Pass TC_LF_002:Pass
B2	Balance Enquiry	TC_BE_001, TC_BE_002	TC_BE_001:Pass TC_BE_002:Pass
B3	Fund Transfer	TC_FT_001, TC_FT_002	TC_FT_001:Pass TC_FT_002:Fail

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