SRE Assignment - 3

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Q1. Discuss the steps to create a requirement Traceability Matrix for a Railway Reservation Project.

Ans: The steps are as follows:

1. First we have to identify the use case scenario for which we have to prepare the test cases.
2. We have to then identify the technical requirement that this test case will be verifying.
3. We have to write the technical requirement in the test case.
4. We have identify the Business Requirement for which the technical requirement is defined.
5. Note the business Requirement in the test case.

* The Requirement Traceability Matrix for Railway Reservation Project is as follows

1. Login

Test Case ID	Scenario Name and Description	INPUT 1 USER ID	INPUT 2 Password	Expected Output	Remarks
TC_1	Scenario 1 – Login	Valid	Valid	User is allowed to login	–
TC_2	Scenario 2 – Login Alternative Flow: Invalid Entry	Invalid	Valid	User ID is Invalid	User ID is not in specified Format
TC_3		Invalid	Valid	User ID is invalid	User ID does not exist in Database
TC_4		Valid	Invalid	Password is Invalid	Password is not specified format
TC_5		Valid	Invalid	Password is Invalid	Password does not exist in Database
TC_6		Invalid	Invalid	User ID & Password are Invalid	Login ID & Password are not in specified Format
TC_7	Scenario 3 – Login Alternate Flow: User Exits	Valid/ Invalid Input	Valid/ Invalid Input	User Comes out of the System	–

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2. Search for Trains

Test Case ID	Scenario Name and Description	Input 1 Source City	Input 2 Destination City	Input 3 Date of Train	Expected Output	Remarks
TC_1	Scenario 1 Search for Train	Valid	Valid	Valid	Train searched Successfully	—
TC_2	Scenario 2 Search for Train Alternate Flow : Invalid Entry	Invalid/ Blank	Valid/ Invalid	Valid/ Invalid	Source city is Invalid	Source city entered is Invalid
TC_3		Valid	Invalid/ Blank	Valid/ Invalid	Destination City is Invalid	Destination City entered is Invalid
TC_4		Valid	Valid	Invalid/ Blank	Date of Train is Invalid	Date of Train entered is Invalid
TC_5	Scenario 3 Search for Train Alternative Flow: User Exits	Valid/ Invalid	Valid/ Invalid	Valid/ Invalid	User comes out of the System	—

3. View Train Occupancy

Test Case ID	Scenario Name and Description	Input 1 Enter Train Number	Expected output	Remarks
TC_1	Scenario 1 - View Train Occupancy	Valid	Train Occupancy shown	—
TC_2	Scenario 2 - View Train Occupancy Alternative Flow: Invalid Details	Invalid/ Blank	Train Number is Invalid	Train Number entered is Invalid
TC_3	Scenario 3 - User Exits	Valid/ Invalid	User comes out of the System	—

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4. View Booked Ticket (Condition : Tickets are Booked)

Test Case ID	Scenario Name and Description	INPUT 1 Enter Ticket Number	Expected Output	Remarks
TC_1	Scenario 1 – View Booked Ticket	Valid	Booked Ticket Details are shown	–
TC_2	Scenario 2 – View Booked Ticket – Alternate Flow: Invalid Details	Invalid	Ticket Number is Invalid	Ticket Number entered is Invalid
TC_3	Scenario 3 – View Booked Ticket Alternate Flow: User Exits	Valid/ Invalid	User Comes out of the system	–

5. Cancel Booked Ticket (Condition : Tickets are Booked and Refund Condition is satisfied)

Test Case ID	Scenario Name and Description	Input 1 Ticket Number	Input 2 User ID	Expected Output	Remarks
TC_1	Scenario 1 – Cancel Booked Ticket	Valid	Valid	Tickets Cancelled	–
TC_2	Scenario 2 – Cancel Booked Ticket Alternate Flow: Invalid Details	Invalid/ Blank	Valid/ Invalid	Ticket Number Invalid	Ticket Number entered is invalid
TC_3		Valid	Invalid/ Blank	User ID Invalid	User ID entered is Invalid
TC_4	Scenario 3 – Cancel Booked Ticket Alternate Flow: User Exits	Valid/ Invalid	Valid/ Invalid	User comes out of the system	–

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Q2. Discuss the importance of requirements management tools.

Ans: The importance of project management tools are as follows :-

i) It helps in increase project management effectiveness and cross functional collaboration capabilities.

ii) It helps in managing projects more accurately i.e. helps in controlling costs, meeting project due dates and fending off scope creep.

iii) It ensures that detailed tasks are never lost through the cracks in organization no matter how broad or deep the requirements may change.

iv) It helps in assigning responsibility, accountability, tasks and even plan segregation of rules.

v) It ensures that stakeholders fully understand project scope and complexity across the entire set of requirements that defines a projects' work breakdown structure.

vi) It helps in managing version of changes and also helps to store requirement attributes.

vii) It helps to link requirements to other system elements.