

CS 301

Software Engineering

Module - 33

Eswaran Narasimhan

At the end of the session, you will be able to:



- ☐ **Create Test Plan Documents**
- ☐ **Creating Test Case specification**
- ☐ **Creating Test Case execution**

Test Cases

- ☐ What are Test Cases?
- ☐ Inspiration for a Test Case
- ☐ Types of Test Cases
- ☐ Writing a Test Case
- ☐ Using a Test Case
- ☐ Test Completion Report

- ❖ Is a document
 - Test data
 - Preconditions
 - Expected results
 - Postconditions
- ❖ Test Case is a starting point for the testing process

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- ❖ Boundary Values
- ❖ Attribute Dependencies
- ❖ Decision Table Testing
- ❖ State Transition Diagrams
- ❖ Use Case Testing

Decision Table Testing

	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6	Rule 7	Rule 8	Rule 9
Conditions	TC01	TC02	TC03	TC04	TC05	TC06	TC07	TC08	TC09
UserID	Blank	Valid	Invalid	Blank	Blank	Invalid	Valid	Invalid	Valid
Password	Blank	Blank	Blank	Valid	Invalid	Valid	Invalid	Invalid	Valid
Action									
Login Successful									☒
Error	X	X	X	X	X	X	X	X	

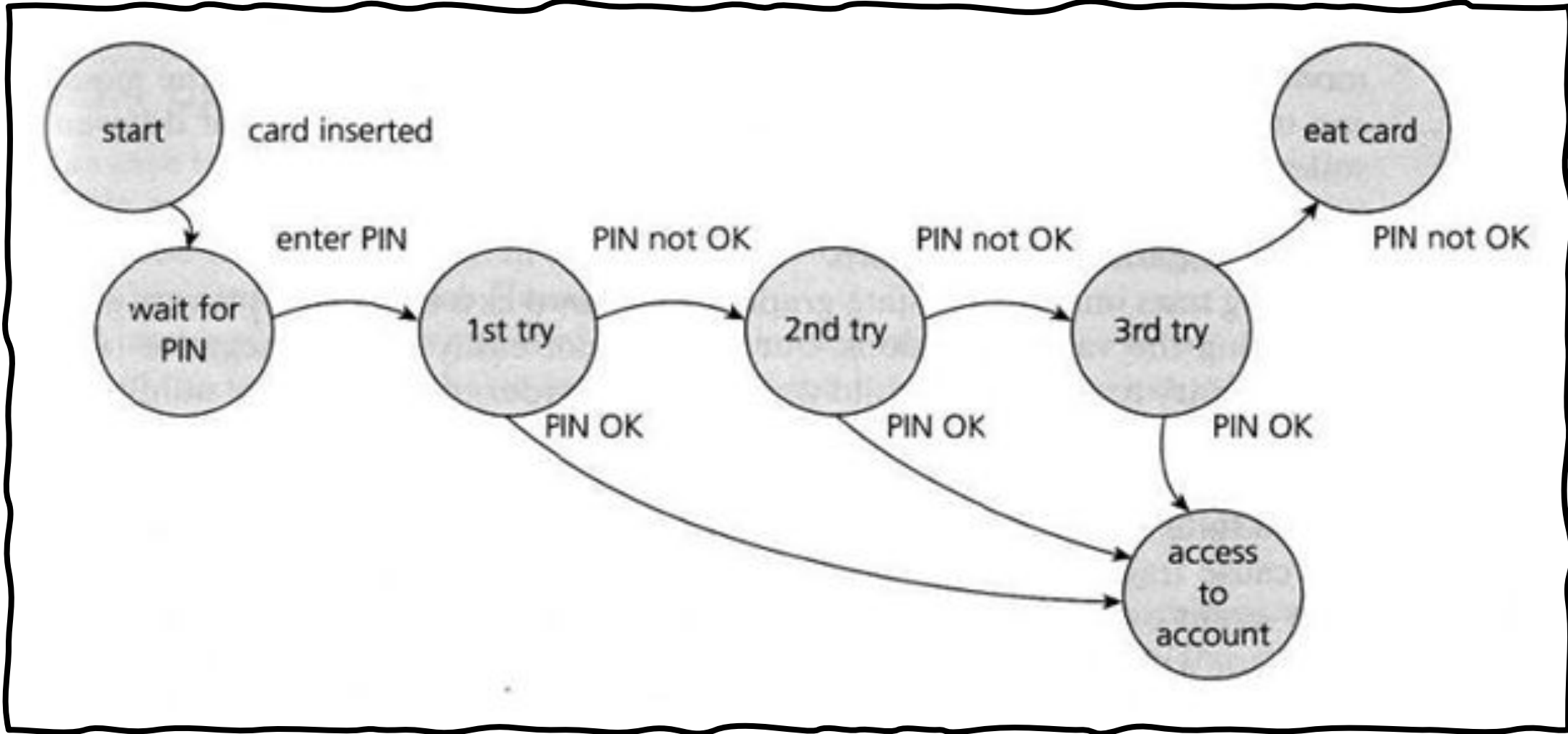
	Rule 2	Rule 8	Rule 9
Conditions	TC02	TC08	TC09
UserID	Valid	Invalid	Valid
Password	Blank	Invalid	Valid
Action			
Login Successful			☒
Error	X	X	

Decision Table Testing

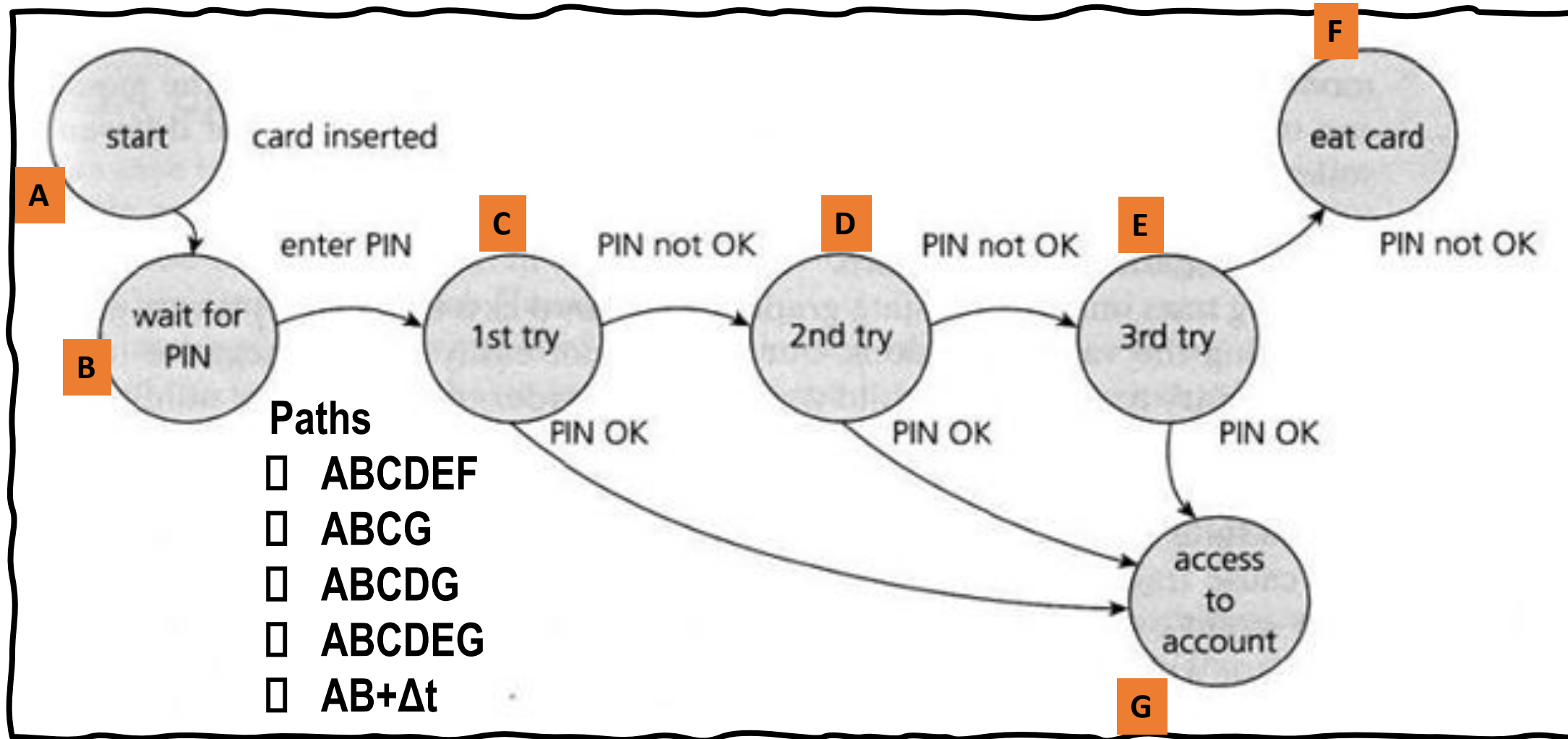
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Password	Blank	Blank	Blank	Valid	Invalid	Valid	Invalid	Invalid	Valid
Action									
Login Successful									☒
Error	X	X	X	X	X	X	X	X	

- ❑ Helps to identify all the important combinations of conditions.
- ❑ Identification of any gaps in the requirements is possible.
- ❑ Conversion of complex business rules into simple decisions tables

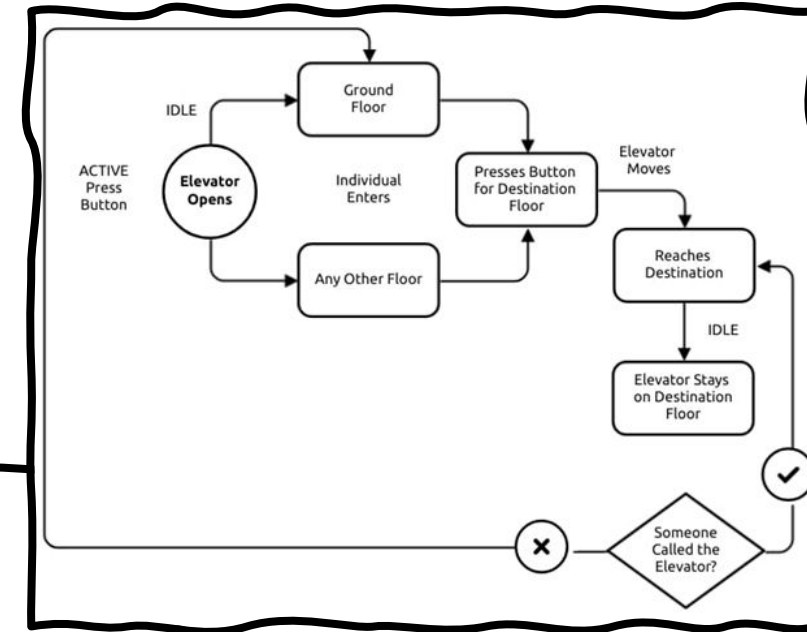
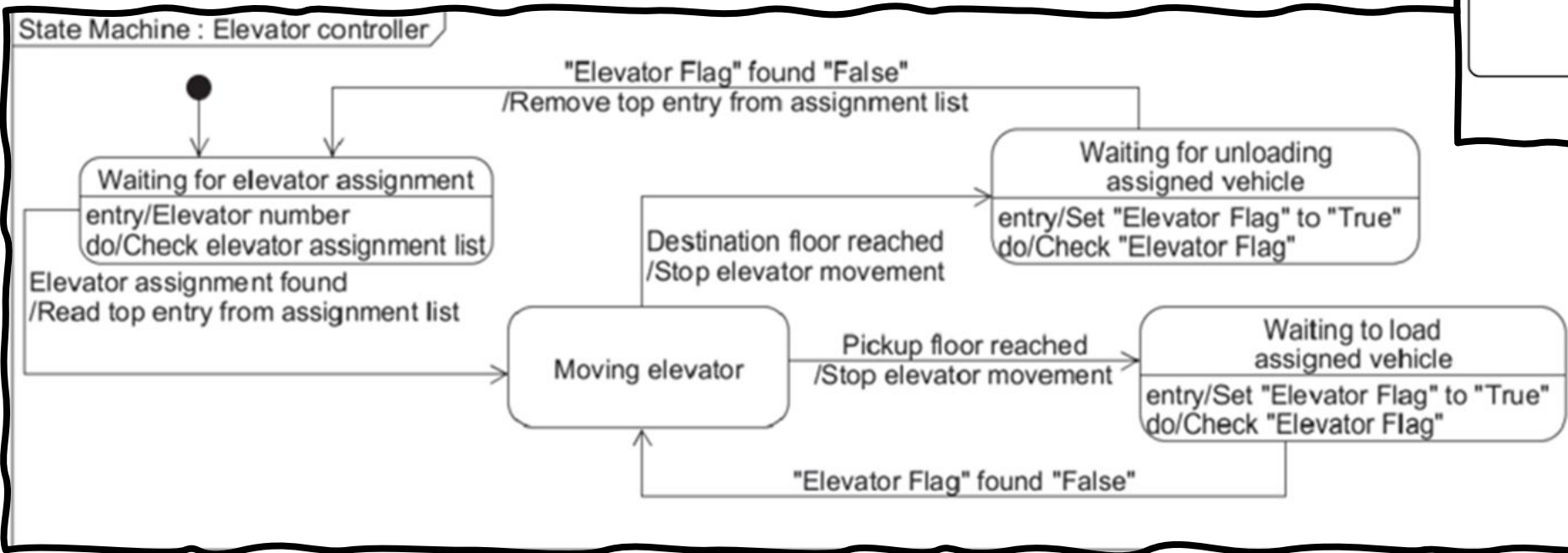
State Transition Diagrams Testing



State Transition Diagrams Testing



State Transition Diagrams Testing



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- ◆ **Functionality**
- ◆ User Interface
- ◆ Performance
- ◆ Integration
- ◆ Usability
- ◆ Database
- ◆ Security
- ◆ User Acceptance

Test Cases

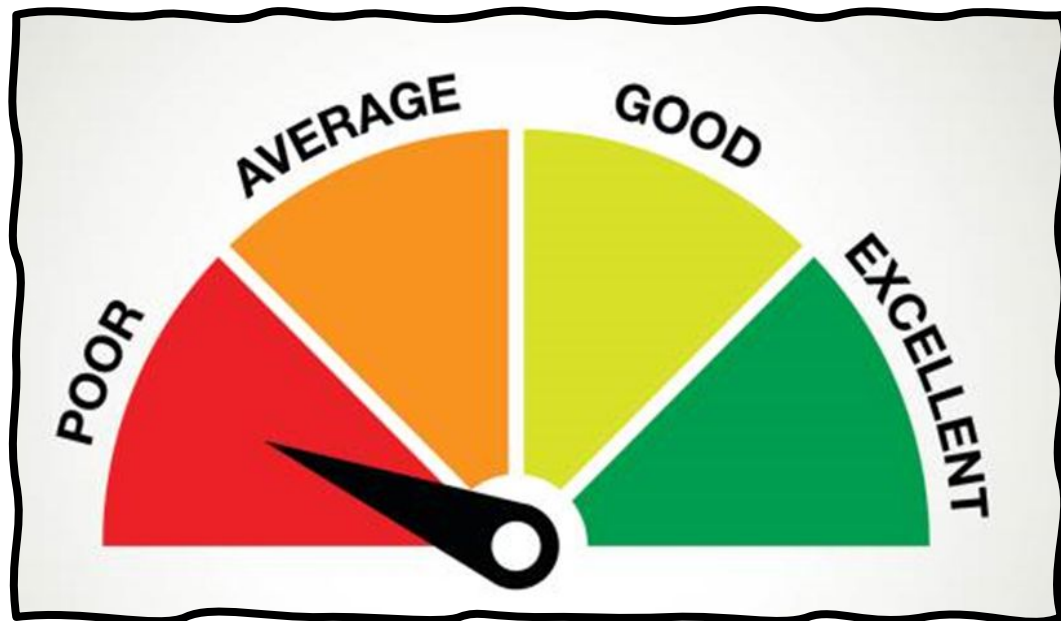
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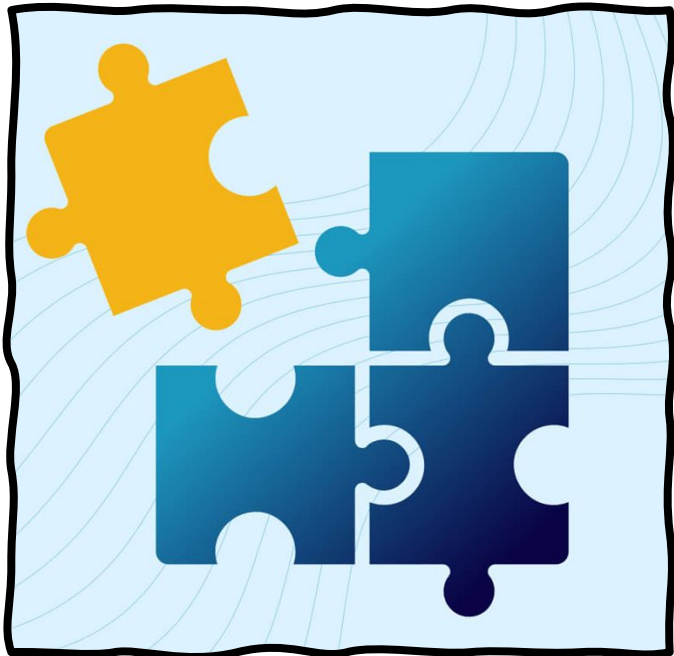
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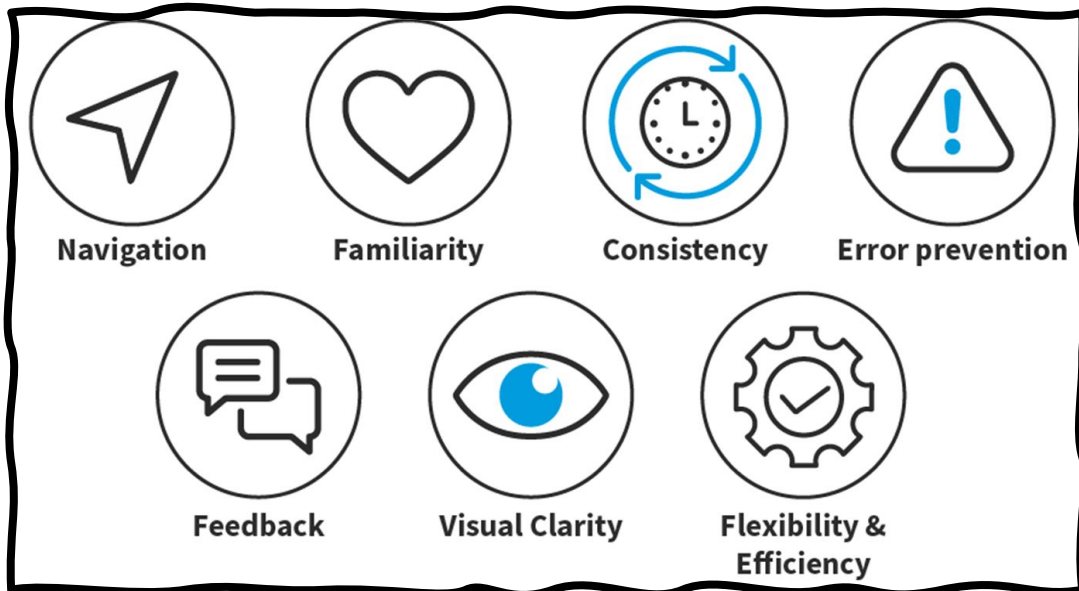
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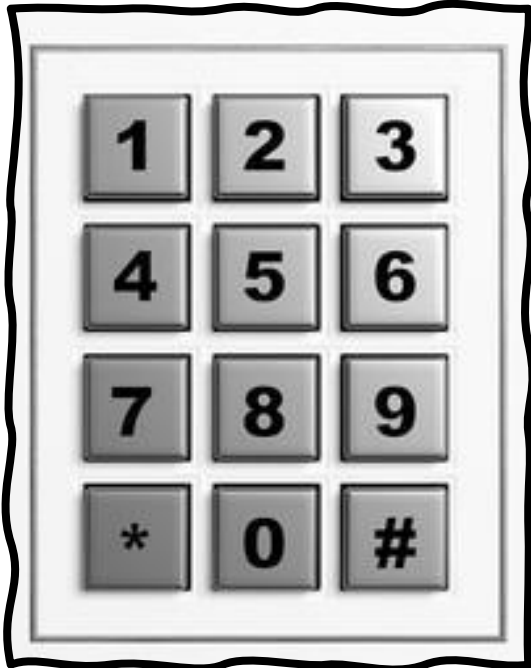
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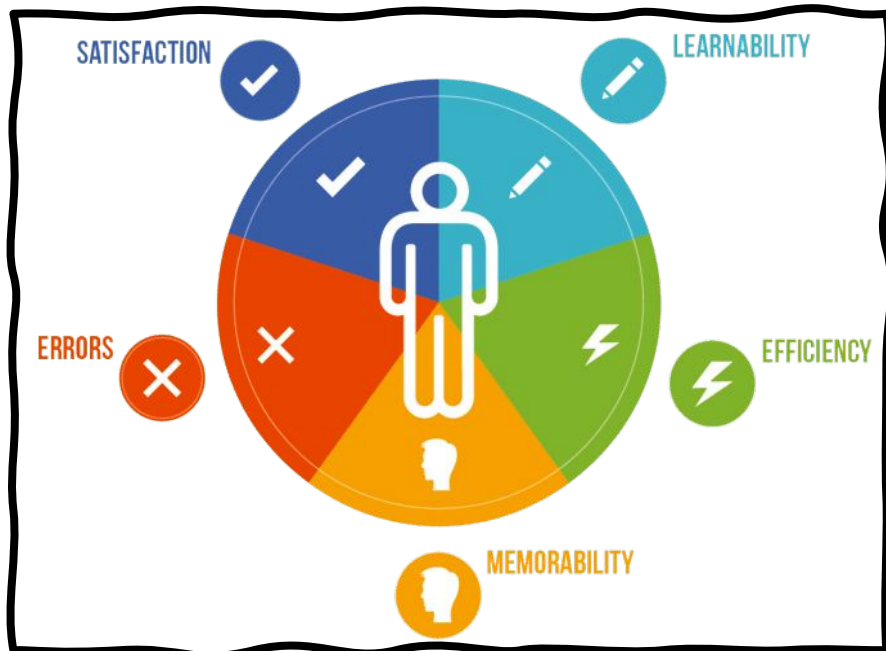
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- [illegible]

- ID – for reference, traceability
- Test Scenario
- Description
- Steps
- Prerequisites
- Test Data
- Expected Result
- Test Parameters
- Actual Result
- Environment Information
- Comments

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- ❖ Executing Test Case
 - Set up environment
 - Validate Prerequisites
 - Execute Test Case
 - Document Results
- ❖ Document Results
- ❖ Test Case Suites

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Release 1.2 Test Completion Report

Executive Summary

99.5 % Test Execution Complete with 99% Pass rate

6 Open Defects (1P2 and 5 P3) are approved by Business as exceptions to go to production

5 Failed and 3 Blocked Test cases are related to Test Data setup issues - Reviewed and Approved by Business

Overall Sprint Testing - Functional

Functionality	Total Test Cases	Passed	Failed	No Run	Blocked	Execution %	Pass%	Fail %
Home	100	100	0	0	0	100.0%	100.0%	0.0%
PLP	130	130	0	0	0	100.0%	100.0%	0.0%
PDP	150	149	0	0	1	99.3%	99.3%	0.0%
Bag	200	198	2	0		100.0%	99.0%	1.0%
Checkout	250	245	3	0	2	99.2%	98.0%	1.2%
Orders	50	49	0	0	1	98.0%	98.0%	0.0%
Total	880	871	5	0	3	99.5%	99.0%	0.6%

Defect Status

Status	P1	P2	P3	P4
Open	0	1	5	0
Fixed	0	0	0	0
Ready for Test	0	0	0	0
Closed	15	25	75	60
Total	15	26	80	60

CR Status

Status	High	Medium	Low
New	0	0	0
In Review	0	1	0
Approved	1	3	4
Rejected	2	0	1
Total	3	4	5

- ❖ Tests Executed
- ❖ Tests Passed
- ❖ Tests Failed module wise
- ❖ Defects Raised
- ❖ Defects Accepted
- ❖ Defects Rejected
- ❖ Defects Deferred
- ❖ Status of Active defects
- ❖ Computing Quality Index

We covered the following:



- ☐ Create Test Plan Documents
- ☐ Creating Test Case specification
- ☐ Creating Test Case execution