# Assignment 1

191911098

T.udaykiran

CSE

Subject :- CSA3741- Software testing for business management.

1) Case study :- Analysis of system specifications, Bugs, Functional and Non-functional operations, and test cases for an ATM system.

① ~~*~~ System Specifications:-

An Automated Teller Machine (ATM) is a self-~~s~~ service banking terminal designed to provide ~~to~~ customers with access to various banking operations. The following are the system specifications of an ATM:-

Functional Operations :-

1) Cash Withdrawal :- Customers can withdraw cash ~~w~~ from their linked bank äccounts within their available ~~bta~~ balance.

2) Balance Inquiry :- Customer can check the current balance of their linked bank account.

3) Fund Transfer :- Customers can transfer finds between their own accounts or to other accounts within the same bank.

4) Deposite :- Customers can ~~change their ATM PIN for security reasons~~ deposite cash or check into their accounts (where available).

5) PIN Change :- Customer can change ~~thise~~ their ATM PIN for security reasons.

6) Mini Statements : Customers can request a ~~(security)~~ summary of recent transaction on their account.

# Non-Functional Operations :-

1) Availability :- The ATM should be operational 24/7 allowing customers to access their accounts at any time.

2) Security :- The system must ensure secure transactions, protecting user data and financial information.

3) Performance :- Transactions should be processed quickly and efficiently, minimizing customer wait times.

4) Reliability :- The system should be reliable and able to handle a high volume of transactions without downtime.

5) Usability :- The user interface should be intutive, making it easy for customers to perform transactions

6) Scalability :- The system should handle an increasing number of users and transactions without performance degradation.

## (2) Bugs and Issues:-

Despite careful development, there can be bugs and issues in the ATM system.

1) Transaction Hang:- Sometimes, a transaction might hang, leaving the customer unsure about whether the trasaction was successful or not.

2) Card Jam:- The ATM could jam a customer's card, preventing further transactions

3) Incorrect Receipt:- Receipt may not point correctly or might show wrong transaction details.

4) Account lock out:- Entering an incorrect PIN multiple times could lock the user's account

5) Cash Dispensing Error:- There could be situations where the ATM dispenses an incorrect amount of cash.

6) Network outage:- Network outages might prevent customers from completing transactions.

7) Slow Performance:- The ATM might respond solwly, causing customer frustration.

## ③ Test cases:-

Here are a few test Cases to evaluate the functionality of the ATM system:

## Functional Test Cases:-

1) Test Case:- Cash Withdrawal

→ Input:- Account number, PIN withdrawal amount.

→ Expected Outcome:- Cash dispensed, updated account balance

→ Pass Statement:- "Cash dispensed successfully Account balance updated!".

2) Test case:- Balance Inquiry

→ Input:- Account number, PIN.

→ Expected Outcomes: Displayed account balance

→ Pass Statement: "Account balance displayed correctly".

3) Tast Case: Fund Transfer

→ Input ! Sender's account number, PIN, recipient's account number, transfer amount.

→ Expected Outcome :- Funds transferred, updated account balances

→ Pass Statement :- "Funds transferred successfully. Account balances updated".

Non - Functional Test Cases :-

1) Tast Case :- Availability

→ Input: Attempt to use the ATM at ~~dif~~ different times

→ Expected Outcome :- ATM operational 24/7

→ Pass Statement : "ATM available at all times".

2) Test Case : Security

→ Input: Attempt to access the ATM without a valid Caord / PIN

→ Expected Outcome :- Denied acces, security prompt.

→ Pass statement :- "Security measures in place. unauthorized acces denied."

3) Test Case : Performance

→ Input : Multiple users performing transactions simultaneously

→ Expected Outcome : Quick and efficient processing

→ Pass Statement: "Transactions processed promptly even during high usage".