

Software Requirement Engineering (SE-301-A)



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Topic:

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BS Software Engineering (III)

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Functional Requirements:

Features	Actors	<i>Functional Requirements</i>
Register	User, Admin	<ul style="list-style-type: none">• The system shall provide a registration feature for users to create new accounts.• The system shall require users to provide necessary details including Name, CNIC, Email, Password, and verify these details.• The system shall validate the provided information during registration.• The system shall create a new account upon successful validation of user information.
Login	User, Admin	<ul style="list-style-type: none">• The system shall provide a login feature for users to access their accounts.• The system shall require users to enter their credentials, including Email/username and password, for login.• The system shall validate the entered credentials during the login process.• The system shall allow users to log in only if the provided credentials are correct.
Funds Transfer	User, Admin	<ul style="list-style-type: none">• The system shall provide a functionality for users to transfer funds between accounts.• The system shall support both intra-bank and inter-bank fund transfer.• The system shall verify the availability of sufficient balance in the user's account before processing the fund transfer.• The system shall require user confirmation, possibly through OTP verification or biometric verification, for completing the fund transfer.
Payment	User, Admin	<ul style="list-style-type: none">• The system shall provide a feature for users to pay utility bills and institute fees online.• The system shall verify the availability of sufficient balance in the user's account before processing bill payments.• The system shall support various utility bill categories for payments.

Card Information	User	<ul style="list-style-type: none"> The system shall allow users to view their card information. The system shall allow users to block their cards in case of theft or loss.
Payment History	User	<ul style="list-style-type: none"> The system shall provide users with access to their transaction history or E-Statement. The system shall allow users to view and download transaction history.
Notification	User, Admin, Help Center	<ul style="list-style-type: none"> The system shall provide users with transaction notifications. The system shall allow users to set up notification preferences.
Customer Support	User	<ul style="list-style-type: none"> The system shall provide a feature for users to contact customer support. The system shall generate support tickets for user inquiries or issues.
Logout	User, Admin	<ul style="list-style-type: none"> The system shall provide a logout feature for users to securely log out of their accounts. The system shall prompt users to confirm their intention to logout before proceeding with the logout action.

User Case Description/Scenario

UC-01: Registration		
Actors:	User, Admin	
Feature:	Registration	
Use case Id:	UC-01	
Description:	Allows users to create a new account easily.	
Pre-condition:	Must have an active internet connection.	
Scenarios		
Step#	Action	Software Reaction

1.1	User navigates to the registration page.	
1.2	User provides necessary details (Name, CNIC, Email, Password, Verification of these details).	
1.3	User clicks on the “Register” button.	System validates the information and creates a new account.
Alternate Scenarios:		
The provided information is not eligible i.e. user in under 18.		
Post Conditions:		
Step#	Description	
1	User’s account is successfully created.	
User Interface reference		Registration Page

UC-02: Login		
Actors:	User, Admin	
Feature:	Login	
Use case Id:	UC-02	
Description:	Allows Users to create a new account easily.	
Pre-condition:	1. User must have an active internet connection. 2. User’s account is already registered in the system.	
Scenarios		
Step#	Action	Software Reaction
2.1	User Navigates to the login page.	
2.2	User enters his details (Email/username, password).	
2.3	User clicks on the “Login” button.	System validates the information and logs into the account.
Alternate Scenarios:		
1. Entered Username/Password was incorrect and system takes user back to step 1.2.2		
Post Conditions:		
User gets logged into the account after successful verification.		
Step#	Description	
1	User’s account is successfully Logged in.	
User Interface reference		Login Page

UC-03: Fund Transfer		
Actors:	User, Admin	
Feature:	Fund Transfer	
Use case Id:	UC-03	
Description:	Allows User to transfer funds between accounts.	
Pre-condition:	User is logged into the application using his credentials.	
Scenarios		
Step#	Action	Software Reaction
3.1	User navigates to the transfer of funds functionality.	
3.2	User selects the type of transaction i.e. intra-bank/inter-bank.	
3.3	User enters the receivers' account number and amount confirms to send.	System verifies if enough balance is available in his account.
3.4	After fetching the final details, user confirms the transaction using OTP verification/biometric verification.	System completes the transaction and updates the account balance.
Alternate Scenarios:		
1. Account balance is not enough.		
Post Conditions		
Step#	Description	
1	Funds are successfully transferred within the User account.	
User Interface reference	Home Page, Transfer Section	

UC-04: Payments		
Actors:	User, Admin	
Feature:	Payments for bills, school fees etc.	
Use case Id:	UC-04	
Description:	Allows user to pay utility bills and institute fee online.	
Pre-condition:	User is logged into the account.	
Scenarios		
Step#	Action	Software Reaction

4.1	User navigates to the bill payment option.	
4.2	User selects the utility bill category.	
4.3	User provides necessary bill details and confirms the payment.	System verifies if enough balance is available in his account.
4.4	After fetching all the details, user completes the payment using OTP Verification/Biometric Verification.	System completes the transaction, pays the bill and updates the account balance.
Alternate Scenarios:		
1. User did not have enough balance in his account.		
Post Conditions		
Step#	Description	
1	Utility bills are successfully paid online.	
User Interface reference		Bill Payment Section

UC-05: Card Information		
Actors: User		
Feature: Card Information		
Use case Id:	UC-05	
Description:	Allows user to view and block their card.	
Pre-condition:	<div>1. User is logged into the account.</div> <div>2. User already is a debit/credit card holder.</div>	
Scenarios		
Step#	Action	Software Reaction
5.1	User navigates to the card’s information option.	
5.2	User selects between his cards and reveal its information.	System prompts the user to verify though some pin/biometric verification and copies the details to the clipboard of device.
5.3	User blocks the card in case of stolen/lost.	System after verification blocks the card.
Alternate Scenarios:		
None		
Post Conditions		
Step#	Description	
1	User manages his card’s information and usability.	

User Interface reference	Cards Information Section
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UC-06: Payment History/E-Statement		
Actors: User		
Feature: Payment History/E-Statement		
Use case Id:	UC-06	
Description:	Allows user to view his previous transactions.	
Pre-condition:	User is logged into his account.	
Scenarios		
Step#	Action	Software Reaction
6.1	User navigates to the payment history option.	
6.2	User selects the from/to dates to view the details of transactions during that period.	System displays all the history of the former transactions to the user and generates pdf file to download.
Alternate Scenarios:		
None		
Post Conditions		
Step#	Description	
1	User can view and download his transaction history/E-Statement	
User Interface reference	Payment History Section	

UC-07: Transaction Notifications		
Actors: User, Admin, Help Centre		
Feature: Alerts and Notifications		
Use case Id:	UC-07	
Description:	Allows User to receive notifications for every transaction and any update about system maintenance etc.	
Pre-condition:	User is successfully registered in the system.	
Scenarios		
Step#	Action	Software Reaction
7.1	User sets up transaction notification preferences.	System sends notifications for transactions exceeding a defined threshold.
Alternate Scenarios:		

1. User has disabled receiving notifications option.		
Post Conditions		
Step#	Description	
1	User receives timely notifications for transactions and scheduled system maintenance.	
User Interface reference		Notification Preferences

UC-08: Contact Customer Support		
Actors: User, Help Centre		
Feature: Customer Support		
Use case Id:	UC-08	
Description:	Allows customers to contact customer support for assistance.	
Pre-condition:	User is a registered account holder in the system.	
Scenarios		
Step#	Action	Software Reaction
8.1	Customer initiates a support request through the system.	
8.2	Customer provides details of the issue or inquiry.	System generates a support ticket and notifies the customer.
Alternate Scenarios:		
None		
Post Conditions		
Step#	Description	
1	Customer's support request is successfully logged.	
User Interface reference		Customer Support Section

UC-09: Logout	
Actors: User, Admin	
Feature: Logout	
Use case Id:	UC-09
Description:	Allows user to logout securely.
Pre-condition:	User was already logged into the account.
Scenarios	

Step#	Action	Software Reaction
9.1	User navigates and selects the "Logout" button.	Prompts the user to confirm their intention to logout.
9.2	User confirm their action again.	Log the user out of their account.
Alternate Scenarios:		
None		
Post Conditions:		
Step#	Description	
1	User is successfully logged out of their account.	
User Interface reference		Logout