LAST NATIONAL BANK - BANKING SYSTEM

User Stories

Sprint 1

User Story	Description	Tasks	Acceptance Criteria
Log In	As an admin, I want to be able to log in, so that I am able to view client details and update their verification status. As a client, I want to be able to log in, so that I can view my details and use the functionality provided by the application.	Design UI Extract data from input fields Verify Admin details Display appropriate message Extract data from input fields Verify Client details Display appropriate message	• Given that I am the admin, when I enter valid details then I should be able to log in successfully and proceed to the next page. • Given that I am the admin, when I enter invalid details then I should be notified that my details were invalid and that the log in process failed. • Given that I am the client, when I enter valid details then I should be able to log in successfully and proceed to the next page. • Given that I am the client, when I enter invalid details then I should be notified that my details were invalid and that the log in process failed.
Admin Registration	As an admin, I want to be able to register, so that I can have access to administrative functions in the application.	Design UI Extract data from input fields Validate administrator details and secret key Encryption PHP files Write to database Display appropriate message	• Given that I am the admin, when I enter valid details, then I should be able to register successfully and proceed to the next screen. • Given that I am the admin, when I enter invalid details, then I should be notified that my details were invalid and that the registration process failed.
Client Registration	As a client, I want to be able to register, so that I can benefit from the client functionalities in the application.	Design UI Extract data from input fields Validate client details Encryption PHP files Write to database Display appropriate message	• Given that I am the client, when I enter valid details then I should be able to register successfully and proceed to the next screen. • Given that I am the client, when I enter invalid details, then I should be notified that my details were invalid and that the registration process failed.

User Story	Description	Tasks	Acceptance Criteria
Client – View Details	As a client, I want to be able to view my details and my registration status, so that I know how to proceed.	Design UI Search for client in database Read client details Display client details	• Given that I am the client, when I request to view my details then I should be able to view my details and registration status as either "pending", "accepted" or "rejected."
Admin – View verification list	As an admin, I want to be able to view a vertical list of users that submitted registration applications for verification, so that I can change their statuses.	Design UI Extract data from database (PHP file) Display data in a vertical list	• Given that I am the admin, when I log in then I should be able to see a vertical list of users that submitted registration applications for verification.

Sprint 2

User Story	Description	Tasks	Acceptance Criteria
Admin - View customer details	As an admin, I want to be able to view a client's details, so that I can make a decision about what their verification status should be changed to.	Design UI PHP file HTTP request Extract data Display data	• Given that I am the admin, when I request to view a client's details then I should be able to see all the details of the selected client.
Admin - Accept/reject registration (Verify client)	As an admin, I want to be able to accept or reject a registration application, so that I can change a client's verification status.	Design UI HTTP request PHP file Real time update Display appropriate message	• Given that I am the admin, when I request to authorise a registration application then I should be able to choose to either "Accept" or "Reject" a registration application.
Customer - View bank account options	As a customer, I want to be able to view the different bank account options available to me, so that I can decide which one I want to open.	Design UI PHP file HTTP request Display data	• Given that I am the client, when I request to view bank account options then I should be able to see the different bank account options available to me.
Client - View Account Screen	As a client, I want to be able to view my bank account details, so that I know how much money is available to me.	Design UI PHP file HTTP request Display data Error Handling	If the user has an active account: • Given that I am the client, when I log in successfully then I should be able to see my name, the type of account I have and the amount of money available in the account. If user does not have an active account: See: Client – display details user story

User Story	Description	Tasks	Acceptance Criteria
Client - Add Account	As a client, I want to be able to create a new account, so that I am able to enjoy the benefits of that account type.	Design UI PHP file HTTP request	• Given that I am the client, when I request to create an account then I am notified by the display of a success message that the account was created.

Sprint 3

Note: A tab navigator was included in this sprint upon request but is not classified as an official user story. The incorporation of user stories into the tab navigator can be classified as a user story.

User Story	Description	Tasks	Acceptance Criteria
Timeline of user activity	As a client, I want to be able to view my timeline, so that I am able to keep track of my activity on the application.	Design UI Create table in database PHP file HTTP request Linking HTTP to UI	• Given that I am the client, when I log into the application successfully then I should be able to view a history of my activities on the application.
View Accounts Page	As a client, I want to be able to view all my bank accounts, so that I am able to decide which one I want to interact with.	Design UI PHP file HTTP request Link HTTP and UI Swipe functionality Restrict account creation	• Given that I am the client, when I request to view my bank accounts then I should be able to see a list of my existing accounts with the bank.
View Specific Bank Account	As a client, I want to be able to view a specific bank account, so that I can see how much money is available to me as well as the transaction history of that specific account.	Organise UI PHP file HTTP request	• Given that I am the client, when I request to view a specific bank account then I should be able to see the account details as well as a list of the transaction history associated with that specific account.
Transact Page	As a client, I want to be able to view transaction options available to me, so that I can decide on the type of transaction I wish to make.	Design UI	• Given that I am the client, when I request to make a transaction then I should be able to see the transaction options available to me.

User Story	Description	Tasks	Acceptance Criteria
Client - View profile page	As a client, I want to be able to view my profile details, so that I am able to see my verification status.	Update UI	• Given that I am the client, when I request to view my details then I should be able to see my details and registration status as either “pending”, “accepted” or “rejected.”
Client - Add Account (Was in sprint 2. Required to update in sprint 3)	As a client, I want to be able to create a new account, so that I am able to enjoy the benefits of that account type.	PHP file HTTP request Link HTTP to UI	• Given that I am the client, when I request to create an account of a type that I don’t currently have then I am notified by the display of a success message that the account was created. • Given that I am the client, when I request to create an account of a type that I currently have then I am notified by the display of a message that I am not allowed to have more than one account of each type of account available.

Sprint 4

User Story	Description	Tasks	Acceptance Criteria
Make Transfer	As a client, I want to be able to make a transfer, so that I am able to move my money between my accounts.	Design UI PHP file HTTP request Extract data from UI Validate transfer amount	• Given that I am the client, when I enter valid details then I should be able to make a transfer successfully and a success message should be displayed. • Given that I am the client, when I enter invalid details then I should be notified that my details are invalid and a failed message should be displayed.
View transfer records in transaction history (on both accounts)	As a client, I want to be able to view transfers made/received in my transaction history, so that I can keep track of my transfer records for a specific account.		• Given that I am the client, when I view a specific account then I should be able to see the transfer records for that specific account in my transaction history.
View transfer records in timeline(logs) history	As a client, I want to be able to view my transfer records in my log history, so that I am able to see them as part of my user activity in the app.		• Given that I am the client, when I log in and view my log history, then I should be able to see my transfer records as part of the logs if I have made any transfers previously.
Make Payment	As a client, I want to be able to make a payment, so that I am able to move money from my account to someone else's account.	Design UI PHP file HTTP request Extract data from UI Validate transfer amount	• Given that I am the client, when I enter valid details then I should be able to make a payment successfully and a success message should be displayed. • Given that I am the client, when I enter invalid details then I should be notified that my details are invalid and a failure/error message should be displayed.
View payment records in transaction history (both accounts)	As a client, I want to be able to view payments made/received in my transaction history, so that I can keep track of my payment records for a specific account.		• Given that I am the client, when I view a specific account then I should be able to see the payment records for that specific account in my transaction history.

User Story	Description	Tasks	Acceptance Criteria
View payment records in timeline(logs) history	As a client, I want to be able to view my payment records in my log history, so that I am able to see them as part of my user activity in the app.		• Given that I am the client, when I log in and view my log history then I should be able to see my payment records as part of the logs if I have made any payments previously.
Latency testing	As a client, I don't want to experience delays when processing transactions, so that I am able to enjoy a seamless experience.	Create python script	• Given that multiple users are accessing the application at the same time, check whether there are any latency delays.

Semester 2

Sprint 1

User Story	Description	Tasks	Acceptance Criteria
Encryption	As a user, I want the sensitive data that I enter to be encrypted, so that it is safe and secure when being stored in the database.	Update php files Encrypt function Testing	● Given that I am the user, when I enter data into the application, then it should be encrypted before being stored in the database.
Decryption	As a user, I want my sensitive data in the database to be decrypted, so that I am able to understand it and view it on the application.	Update php files Decrypt function Testing	● Given that I am the user, when I use functionalities that read data from the database into the application, then it should be decrypted before being displayed to me.
Web - Login	As an admin, I want to be able to log in, so that I am able to view client details and update their verification status on the web app. As a client, I want to be able to log in, so that I can view my details and use the functionality provided by the web app.	Update UI (Layout + Desktop Interaction)	● Given that I am the admin, when I enter valid details into the web app, then I should be able to log in successfully and proceed to the next page. ● Given that I am the admin, when I enter invalid details into the web app, then I should be notified that my details were invalid and that the log in process failed. ● Given that I am the client, when I enter valid details into the web app, then I should be able to log in successfully and proceed to the next page. ● Given that I am the client, when I enter invalid details into the web app, then I should be notified that my details were invalid and that the log in process failed.

User Story	Description	Tasks	Acceptance Criteria
Web - Client Registration	As a client, I want to be able to register, so that I can benefit from the client functionalities in the web app.	Update UI (Layout + Desktop Interaction)	• Given that I am the client, when I enter valid details into the web app, then I should be able to register successfully and proceed to the next screen. • Given that I am the client, when I enter invalid details into the web app, then I should be notified that my details were invalid and that the registration process failed.
Web - Admin Registration	As an admin, I want to be able to register, so that I can have access to administrative functions in the web app.	Update UI (Layout + Desktop Interaction)	• Given that I am the admin, when I enter valid details into the web app, then I should be able to register successfully and proceed to the next screen. • Given that I am the admin, when I enter invalid details into the web app, then I should be notified that my details were invalid and that the registration process failed.
Web - Client : View Profile Page	As a client, I want to be able to view my details and my registration status on the web app, so that I know how to proceed.	Update UI (Layout + Desktop Interaction)	• Given that I am the client, when I request to view my details in the web app, then I should be able to view my details and registration status as either “pending”, “accepted” or “rejected.”

Sprint 2

User Story	Description	Tasks	Acceptance Criteria
Web - Admin: View verification list	As an admin, I want to be able to view a vertical list of users that submitted registration applications for verification, so that I can change their statuses on the web app.	Update UI (Layout + Desktop Interaction)	● Given that I am the admin, when I log into the web app, then I should be able to see a vertical list of users that submitted registration applications for verification.
Web - Admin: View customer details	As an admin, I want to be able to view a client's details on the web app, so that I can make a decision about what their verification status should be changed to.	Update UI (Layout + Desktop Interaction)	● Given that I am the admin, when I request to view a client's details on the web app, then I should be able to see all the details of the selected client.
Web - Admin: Accept/reject registration (Verify client)	As an admin, I want to be able to accept or reject a registration application on the web app, so that I can change a client's verification status.	Update UI (Layout + Desktop Interaction)	● Given that I am the admin, when I request to authorise a registration application on the web app, then I should be able to choose to either "Accept" or "Reject" a registration application.
Web - Client: View bank account options	As a customer, I want to be able to view the different bank account options available to me on the web app, so that I can decide which one I want to open.	Update UI (Layout + Desktop Interaction)	● Given that I am the client, when I request to view bank account options on the web app, then I should be able to see the different bank account options available to me.
Web - Client: Add Account	As a client, I want to be able to create a new account on the web app, so that I am able to enjoy the benefits of that account type.	Update UI (Layout + Desktop Interaction)	● Given that I am the client, when I request to create an account on the web app, then I am notified by the display of a success message that the account was created.
Web - Client: View Accounts Page	As a client, I want to be able to view all my bank accounts on the web app, so that I am able to decide which one I want to interact with.	Update UI (Layout + Desktop Interaction)	● Given that I am the client, when I request to view my bank accounts on the web app, then I should be able to see a list of my existing accounts with the bank.

User Story	Description	Tasks	Acceptance Criteria
Web - Client: Timeline	As a client, I want to be able to view my timeline on the web app, so that I am able to keep track of my activity on the web app.	Update UI (Layout + Desktop Interaction)	• Given that I am the client, when I log into the web app successfully, then I should be able to view a history of my activities on the application.
Web - Client: View Specific Bank Account	As a client, I want to be able to view a specific bank account on the web app, so that I can see how much money is available to me as well as the transaction history of that specific account.	Update UI (Layout + Desktop Interaction)	• Given that I am the client, when I request to view a specific bank account on the web app, then I should be able to see the account details as well as a list of the transaction history associated with that specific account.
Web - Client: Transact Page	As a client, I want to be able to view transaction options available to me on the web app, so that I can decide on the type of transaction I wish to make.	Update UI (Layout + Desktop Interaction)	• Given that I am the client, when I request to make a transaction on the web app, then I should be able to see the transaction options available to me.

Sprint 3

User Story	Description	Tasks	Acceptance Criteria
Web - Client: Make Transfer	As a client, I want to be able to make a transfer on the web app, so that I am able to move my money between my accounts.	Update UI (Layout + Desktop Interaction)	● Given that I am the client, when I enter valid details on the web app, then I should be able to make a transfer successfully and a success message should be displayed. ● Given that I am the client, when I enter invalid details on the web app, then I should be notified that my details are invalid and a failed message should be displayed.
Web - Client: View transfer records in transaction history (on both accounts)	As a client, I want to be able to view transfers made/received in my transaction history on the web app, so that I can keep track of my transfer records for a specific account.	Update UI (Layout + Desktop Interaction)	● Given that I am the client, when I view a specific account on the web app, then I should be able to see the transfer records for that specific account in my transaction history.
Web - Client: View transfer records in timeline(logs) history	As a client, I want to be able to view my transfer records in my log history on the web app, so that I am able to see them as part of my user activity in the app.	Update UI (Layout + Desktop Interaction)	● Given that I am the client, when I log in and view my log history on the web app, then I should be able to see my transfer records as part of the logs if I have made any transfers previously.
Web - Client: Make Payment	As a client, I want to be able to make a payment on the web app, so that I am able to move money from my account to someone else's account.	Update UI (Layout + Desktop Interaction)	● Given that I am the client, when I enter valid details on the web app, then I should be able to make a payment successfully and a success message should be displayed. ● Given that I am the client, when I enter invalid details on the web app, then I should be notified that my details are invalid and a failure/error message should be displayed.

User Story	Description	Tasks	Acceptance Criteria
Web - Client: View payment records in transaction history (both accounts)	As a client, I want to be able to view payments made/received in my transaction history on the web app, so that I can keep track of my payment records for a specific account.	Update UI (Layout + Desktop Interaction)	• Given that I am the client, when I view a specific account on the web app, then I should be able to see the payment records for that specific account in my transaction history.
Web - Client: View payment records in timeline(logs) history	As a client, I want to be able to view my payment records in my log history on the web app, so that I am able to see them as part of my user activity in the app.	Update UI (Layout + Desktop Interaction)	• Given that I am the client, when I log in and view my log history on the web app, then I should be able to see my payment records as part of the logs if I have made any payments previously.

Sprint 4

User Story	Description	Tasks	Acceptance Criteria
Web app - Client: Statements button on specific account	As a client, I want to have the option of requesting a statement whilst viewing a specific account, so that I am able to track my finances for that account.	Create Statements button Routing	• Given that I am the client, when I am viewing a specific account on the web app, then I should be able to request statements.
Web app - Client: Statements Page	As a client, I want to be able to specify the time period for my statement request, so that I am able to track my finances for that specific period.	UI HTTP Request PHP File	• Given that I am the client, when I view the statements page on the web app, then I should be able to select the time period for which I want my statement to be generated.
Web app - Client: Generate PDF	As a client, I want to be able to confirm my statement request, so that the statement gets generated.	Layout Design	• Given that I am the client, when I confirm my statement request on the web app, then the generated PDF should be displayed. • Given that I am the client, when I confirm my statement request on the web app, then a failure/error message should be displayed if the PDF is not generated.
Web app - Client: Download PDF	As a client, I want to have the option to download my PDF statements, so that I can keep a copy of it with me for easy access.	Download function	• Given that I am the client, when I request to download my PDF statements on the web app, then it should begin downloading and a success message should be displayed once complete. • Given that I am the client, when I request to download my PDF statements on the web app, then it should display a failure/error message if the download was unable to complete.

User Story	Description	Tasks	Acceptance Criteria
Web app - Admin: Client Verification Page	As an admin, I want to be able to view client registration applications and edit them on the verification page, so that I can view their details and update their verification status on a single page.	Combine user stories	• Given that I am the admin, when I request to view the verification page on the web app, then I should be able to view customer details and update their verification statuses on the same page.
Mobile App - Client: Statements Button on Specific Account	As a client, I want to have the option of requesting a statement whilst viewing a specific account, so that I am able to track my finances for that account.	UI	• Given that I am the client, when I am viewing a specific account, then I should be able to request statements.
Mobile App - Client: Statements Page	As a client, I want to be able to specify the time period for my statement request, so that I am able to track my finances for that specific period.		• Given that I am the client, when I view the statements page, then I should be able to select the time period for which I want my statement to be generated.
Mobile App - Client: Generate PDF	As a client, I want to be able to confirm my statement request, so that the statement gets generated.		• Given that I am the client, when I confirm my statement request, then the generated PDF should be displayed. • Given that I am the client, when I confirm my statement request, then a failure/error message should be displayed if the PDF is not generated.
Mobile App - Client: Download PDF	As a client, I want to have the option to download my PDF statements, so that I can keep a copy of it with me for easy access.	Download function	• Given that I am the client, when I request to download my PDF statements, then it should begin downloading and a success message should be displayed once complete. • Given that I am the client, when I request to download my PDF statements, then it should display a failure/error message if the download was unable to complete.

Business Rules

- A client has to be verified before being able to create an account.
- The maximum number of accounts that a client can have is the maximum number of unique accounts that the bank offers.
- A client can have one and only of each type of account available.
- Only an admin can change the verification status of a client.
- A client cannot make a payment from an account of an amount more than what they currently have in that account.
- A client cannot make a transfer from an account of an amount more than what they currently have in that account.

Functional Requirements

- Administrators must be able to log in.
- Administrators must be able to register as an administrator using a secret key.
- Administrators must be able to view a list of clients who have registered and have a pending verification status.
- Administrators must be able to view a customer's details.
- Administrators must be able to change a customer's verification status.
- Clients must be able to log in
- Clients must be able to register.
- Clients must be able to view their profile details.
- Clients must be able to view the bank account options available to them.
- Clients must be able to create bank accounts.
- Clients must be able to view all their accounts with the bank.
- Clients must be able to view the details of a specific bank account they have with the bank, including a transaction history of the specified account.
- Clients must be able to view the transaction options available to them.
- Clients must be able to view a timeline of their activity (logs) in the application.
- Clients must be able to make a payment.
- Clients must be able to make a transfer.
- Clients must be able to view the payment made in the transaction history of that account.
- Clients must be able to view the payment received in the transaction history of that account.
- Clients must be able to view the payment made on their activity timeline (logs).
- Clients must be able to view the payment received on their activity timeline (logs).
- Clients must be able to view the transfer made in the transaction history of that account.
- Clients must be able to view the transfer received in the transaction history of that account.
- Clients must be able to view the transfer made on their activity timeline (logs).
- Clients must be able to view the transfer received on their activity timeline (logs).
- Clients must be able to request monthly statements for a specific account.
- Clients must be able to download the PDF statement.

Non-Functional Requirements

- Intuitive user interface
- Security (Password encryption)
- Security (Sensitive data encryption and decryption)
- Access Control