

## **Business rules**

### **1. User Registration and Authentication:**

- a. Must provide unique and valid user information to register.
- b. While logging in the password must be entered correctly.
- c. Cannot register the client with the existing username or email or National id.

### **2. Account management:**

- a. Each user can have one or more accounts (savings, checking, investment)
- b. Every user will receive a unique account number from bank.
- c. Balances and transactions must be updated accurately.
- d. Each new account must be associated with existing user.
- e. Users can check their account balances, review their transaction history, and modify account information like personal details.
- f. Must display the result of the transaction whether it's success or failure.

### **3. Funds Transfer:**

- a. Must have enough to complete a transaction.
- b. Can transfer to external or self-accounts.
- c. All transactions from the client side must be authenticated and authorized by the account holder.
- d. All transactions must be recorded accurately including the amount transferred.

### **4. Reporting and analytics:**

- a. System administrators can generate reports on various aspects of account activity, transaction trends, and financial performance.
- b. Reports must be accurate, customizable, and accessible to authorized personnel only and must be customized based on specific criteria.
- c. Analytics tools may be used to identify patterns, anomalies, or opportunities for improvement in banking operations.

### **5. Admin, staff panel:**

- a. Administrators have privileged access to manage users, staff, accounts, transactions, obtain reports and can be able to edit frontend.
- b. Admin actions, such as account creation, transaction approvals, or managing staff logged for auditing purposes.
- c. Staff manages the clients and their accounts.

**Entities:**

- IB\_ACC\_TYPES
- IB\_ADMIN
- IB\_BANKACCOUNTS
- IB\_CLIENTS
- IB\_NOTIFICATIONS
- IB\_STAFF
- IB\_SYSTEMSETTINGS
- IB\_TRANSACTIONS

**Relationships:**

- One customer can have many accounts, but one account can be held by only one customer.
- Many transactions can be done using one account, but each transaction can be done using only single account.
- One account can have multiple transactions.
- One admin can manage many accounts.
- One admin can manage one or more staffs, clients.
- One staff can manage many accounts.
- One staff can manage many clients.
- One account type can be associated with multiple bank accounts.