



Al-Rajhi Bank Program

by: Shumukh Al-majdi, Khadija Al-marhbi

Task	Assigned to
Phase 1	All members
Phase 2	All members
Phase 3	All members
Phase 4	All members

Contents

0.1	Abstract	3
1	Introduction	3
1.1	The Purpose of the Application	3
2	Survey about Al-Rajhi Bank	4
3	Comparing with other applications	5
3.1	What Distinguishes Al Rajhi Bank	5
4	Phase 2: Requirements	6
4.1	Functional Requirements	6
4.2	Non-Functional Requirements	6
5	Phase 3: Performing the Design	7
5.1	System Architecture	7
5.2	Data model	7
5.2.1	1. Core Banking System	9
5.2.2	2. Digital Banking Platform	10
6	Phase 4:Analyzing Existing Programs	10
7	Conclusion	11
8	References	12

0.1 Abstract

In accordance with Islamic principles, Al Rajhi Bank, a prominent Islamic financial organization, provides a variety of services, such as consumer financing, loans, and deposits. The digital application used by the bank to automate financial procedures for increased accuracy and efficiency is covered in this essay. The app's advantages, including Shariah compliance, a wide branch network, and high customer happiness, are highlighted by a comparative comparison. Secure user authentication, money transfers, and bill payment are important elements that are backed by strong technology for security and scalability. The bank's dedication to a wide range of client needs is further evidenced by creative initiatives like the Million Saving Account and the Sahlha Program. The results highlight how important efficient digital banking is to maintaining financial stability.

1 Introduction

Al Rajhi Bank has provided a variety of banking services such as deposits, loans, investment advisory, securities trading, remittances, credit cards and consumer finance. All services are provided in accordance with Islamic requirements. Al Rajhi bank program is essential to preserving the operational effectiveness and financial stability of its participants since it takes care of these things.

1.1 The Purpose of the Application

We use the bank programs to automate and optimize financial procedures so that financial transactions and records are managed accurately and efficiently. It is intended to provide financial insights, ease transactions, and assist both individuals and companies in maintaining accurate financial data.

Al Rajhi Bank offers many banking and credit services, both for individuals and commercial companies. These services include:

- Accounts and deposit services.
- Trade credit facilities and current account services.
- Account statement services and services for major traders and businessmen.

- Personal finance services for individuals.
- Credit card, letters of credit, and warranty services.

Commitment to accuracy, efficiency, security, effective financial management, and regulatory compliance all work together to strengthen the financial system within organizations, supporting the effectiveness and long-term sustainability of their operations. Organizations can enhance their financial performance and ensure a successful future.

2 Survey about Al-Rajhi Bank

In this section, we present a comparative survey of Al-Rajhi Bank with other banks in the region.



Figure 2: Key success factors of the Al-Rajhi Bank app.

Figure 1: Statistics showing the popularity of the Al-Rajhi app compared to other banks.

3 Comparing with other applications

	advantages	Disadvantages
Al Ahli Bank (Saudi National Bank)	- Comprehensive Services - Strong Digital Presence	- Customer Service - Fees
Bank Albilad	- Shariah-Compliant - Growth and Stability - Remittance Services	- Branch Availability - Limited International Presence
STC (Saudi Telecom Company)	- Network Quality - Innovation - Customer Satisfaction	- Pricing - Customer Service
Arab National Bank (ANB)	- Comprehensive Services - Strong Market Position: - Customer Rewards	- Service Fees - Branch Network

Figure 3: Comparison table of major banking apps in Saudi Arabia, highlighting their advantages and disadvantages.

In Figure 3, We presents a comparison table of major banking apps in Saudi Arabia, highlighting their advantages and disadvantages.

3.1 What Distinguishes Al Rajhi Bank

- **Shariah Compliance:** Al Rajhi Bank is one of the largest Islamic banks in the world.
- **Extensive Branch Network:** It has one of the most extensive branch networks in Saudi Arabia.
- **Strong Financial Performance:** Known for its strong financial stability and consistent growth.

- **Customer Service:** Generally high customer satisfaction due to efficient and friendly service.

4 Phase 2: Requirements

4.1 Functional Requirements

- **User Authentication:** The app should have a safe login process, where users can verify through biometrics or passwords.
- **View Accounts and Transactions:** Users need to be able to see their account balances, transaction history, and financial statements.
- **Fund Transfers:** The app should facilitate the user to transfer money between accounts, other banks, and across borders.
- **Bill Payments:** You can pay utility bills, credit card bills, and other types of payments through the app directly.
- **Transaction Notifications:** The app should alert users to account activity or completed transfers.
- **Customer Support:** There should be provisions for chat or phone customer support within the application itself.
- **ATM Locator:** The app should have a feature that helps users locate nearby ATMs and branches.

4.2 Non-Functional Requirements

- **Quick Loading Times:** The application should load within three seconds for optimal user experience.
- **Scalability:** It should be able to handle tens of thousands, if not hundreds of thousands, of concurrent users.
- **Security:** Ensuring the app is secure with encryption and complies with banking regulations to keep user information safe.
- **User-Friendly:** The app must have an intuitive interface with easy navigation to enhance user satisfaction.

- **Uptime:** The app should have an uptime of 99.9
- **Cross-Platform Compatibility:** The app should work on all types of mobile devices and different operating system versions.

5 Phase 3: Performing the Design

5.1 System Architecture

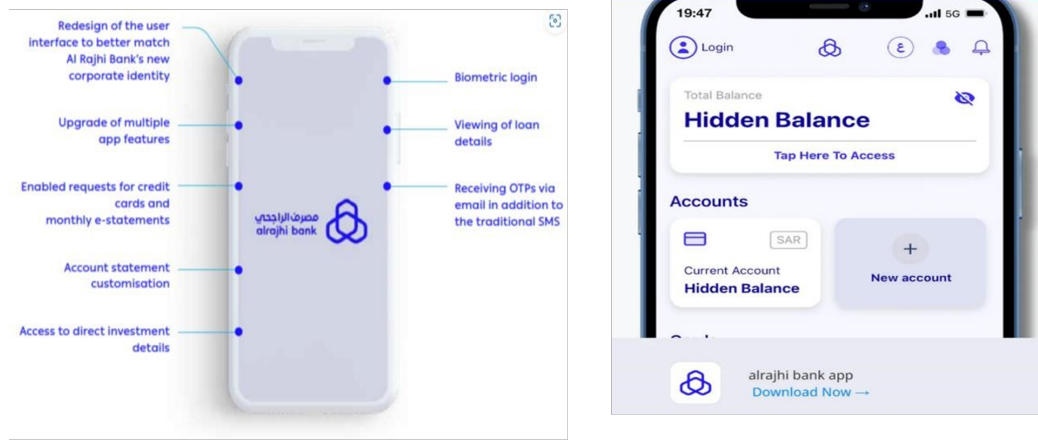


Figure 4: The architecture and data model outline provides a robust framework for Al Rajhi Bank's digital and core banking systems, ensuring scalability, security, and high performance.

5.2 Data model

Creating a data model for Al Rajhi Bank involves outlining the key entities, their attributes, and relationships within the banking system. Below is a simplified conceptual data model:

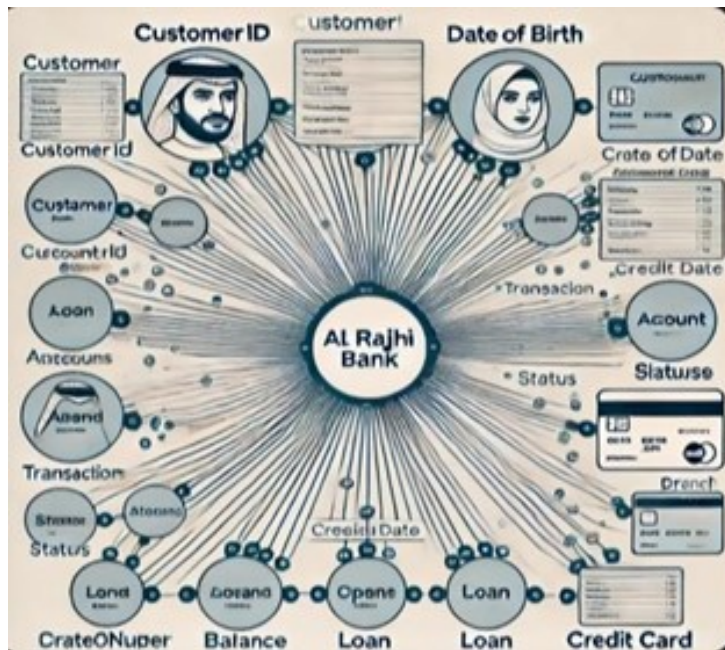


Figure 5: Entity-relationship diagram for the Al Rajhi Bank data model (Image 1).

in Figure 5: describe the entity ,attribute and relationship in data model

Entity	Attributes	Relationship
Customer	<ul style="list-style-type: none"> - CustomerID (Primary Key) - Name - DateOfBirth - Address - PhoneNumber - Email - NationalID 	<ul style="list-style-type: none"> - One-to-Many relationship with Account - One-to-Many relationship with Loan - One-to-Many relationship with CreditCard
Account	<ul style="list-style-type: none"> - AccountID (Primary Key) - AccountType (Savings, Current, Investment) - Balance - OpenDate - Status - CustomerID (Foreign Key) 	<ul style="list-style-type: none"> - One-to-Many relationship with Transaction - One-to-Many relationship with Branch
Transaction	<ul style="list-style-type: none"> - TransactionID (Primary Key) - TransactionDate - Amount - TransactionType (Deposit, Withdrawal, Transfer) - AccountID (Foreign Key) 	<ul style="list-style-type: none"> - Related to Account
CreditCard	<ul style="list-style-type: none"> - CardID (Primary Key) - CardNumber - ExpiryDate - CreditLimit - Balance - CustomerID (Foreign Key) 	<ul style="list-style-type: none"> - Related to Customer
Branch	<ul style="list-style-type: none"> - BranchID (Primary Key) - BranchName - Location - PhoneNumber 	<ul style="list-style-type: none"> - Related to Account

Figure 6: This table outlines the key entities, their attributes, and the relationships between them.

5.2.1 1. Core Banking System

- **Components:** Customer Information File (CIF), Account Management, Transaction Processing, Loan Management, Deposit Management.
- **Technologies:** Java, .NET, Oracle Database, IBM WebSphere.
- **Integration:** API Gateway for integration with third-party services and internal systems.

5.2.2 2. Digital Banking Platform

- **Components:** Mobile Banking, Internet Banking, Chatbots, Digital Wallets.
- **Technologies:** React Native, Angular, Node.js, MongoDB, Kubernetes.
- **Security:** Multi-factor Authentication (MFA), End-to-End Encryption, Secure Socket Layer (SSL).

6 Phase 4:Analyzing Existing Programs

Al Rajhi Bank offers a variety of programs and services tailored to meet different customer needs. Here are a few notable ones:

- **Sahlha Program:** This program allows customers to pay monthly installments for services provided by approved merchants without profit rates or administrative fees. It's designed to benefit both customers and merchants.
- **Personal Finance Products:** Al Rajhi Bank provides a range of personal finance options, including home finance, auto finance, and private pension plans.
- **Cash Management Services:** The bank offers cash management solutions to help businesses manage their finances more efficiently.
- **Credit Cards:** Al Rajhi Bank provides various credit card options, including cashback cards and cards that offer miles on Saudi Arabian Airlines.
- **Million Saving Account:** This account offers customers a chance to win 1,000,000 SAR through the bank's app.

7 Conclusion

Al Rajhi Bank's app must offer secure authentication, view accounts/transactions, enable fund transfers, handle bill payments, send notifications, and provide support and an ATM locator. It needs to be quick, scalable, secure, user-friendly, highly available, and compatible across devices. The bank's design ensures scalability, security, and performance using technologies like Java and Oracle, with integration via an API Gateway, supported by data analytics tools like Hadoop. It also offers diverse services like the Sahlha Program, personal finance options, cash management, credit cards with benefits, and the Million Saving Account, catering to personal and business needs.

8 References

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