# CHALLENGE: FINANCE AND DIGITAL BANKING



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# Challenge Instructions

## Interview Challenge: Finance / Digital Banking

The purpose of this challenge is to understand your skills and thought process, and how you apply them to product tasks.

The interview challenge is designed to replicate real case scenarios that a business analyst may face and needs to elicit requirements for the implementation. It serves as a valuable complement to inperson interviews, offering a practical assessment of your business analyst skills and approach.

In this exercise, there are no definitive 'correct' or 'incorrect' answers. Instead, we aim to gain insight into your problem-solving abilities, strategic thinking, and documentation techniques applied to the specific scenario and context.

We require you to complete at least the mandatory modules before the technical interview, being the optional modules desirable to complete a more thorough assessment.

### Context and situation

"XYZ" bank is one of the top leaders in a small country on personal banking and it has been downsizing its offices around big cities, preserving small cities' attendance at 100%.

Aligning to this goal, they are reinforcing digital platform use.

The bank does not yet have a mobile application, only web online banking is available and client complaints are increasing as they can't operate as they wish to operate on their mobile devices.

By listening to the voice of the customer, they want to develop a new digital banking product for the mobile experience, covering both platforms: website and mobile.

#### **Requirements**

The new product must allow customers to perform the following operations:

- Transfers between own accounts
- Transfers between accounts of different banks
- Pay services
- Cash deposits
- Cash withdrawals

The solution must meet the following security and performance standards:

• Availability: The system must be available 99.9% of the time.

- Security & Accessibility: The system must protect customer information and meet accessibility requirements for this industry.
- Performance: The system must respond within 2 seconds.

## **Assumptions**

- The existing web solution already counts with the described features and additional ones.
- The solution must apply to both cell phones and tablets.

## Jobs to be done

## Required

- 1. Create a story mapping for the product
- 2. Create a high-level roadmap for implementing a first version of this product and provide an explanation about the functionalities that you consider top priority for this version.
- 3. Add at least one KPI related to one goal the client or team wishes to accomplish
- 4. Select 3 PBIs and draft the complete user stories adding further details: Description, AC, Wireframes, etc. If possible, include at least one user story covering back-end or technical requirements.

## **Optional**

- 5. Define the target personas for your product
- 6. Include a SWOT analysis of the top 3 competitors of your product. Hint: you could use a generative AI tool for this;)
- 7. State the product vision
- 8. Provide the product backlog including functional and non-functional requirements.

**Note**: Please make all the assumptions that you consider in the product solution and deliver this exercise as a single file.

# STORY MAPPING for XYZ Bank's Mobile Banking Product

EPICS	Account Management	Transfers	Payments	Cash Operations	Security & Authentication	Performance & Availability
FEATURES (TASKS)	View account balance	Transfer between own accounts	Pay utility bills	Deposit cash	Log in securely	Ensure system availability (99.9% uptime)
	View transaction history	Transfer to accounts in different banks	Pay credit card bills	Withdraw cash	Set up two-factor authentication (2FA)	Optimize system response time (<2 seconds)
		View transfer history	View payment history	Locate nearest ATM	Reset password or recover account	
USER STORIES	As a customer, I want to view my account balance, so that I can track my finances.	As a customer, I want to transfer money between my own accounts, so that I can manage my funds.	As a customer, I want to pay my utility bills, so that I can avoid late fees.	As a customer, I want to deposit cash, so that I can add funds to my account.	As a customer, I want to log in securely, so that I can access my account safely.	As a customer, I want the system to be available 99.9% of the time, so that I can access my account whenever I need to.
	As a customer, I want to view my transaction history, so that I can monitor my spending.	As a customer, I want to transfer money to accounts in different banks, so that I can send money to others.	As a customer, I want to pay my credit card bills, so that I can avoid late fees.	As a customer, I want to withdraw cash, so that I can access my money.	As a customer, I want to set up two-factor authentication, so that I can enhance the security of my account.	As a customer, I want the system to respond within 2 seconds, so that I can perform tasks quickly.
		As a customer, I want to view my transfer history, so that I can keep track of my transactions.	As a customer, I want to view my payment history, so that I can track my expenses.	As a customer, I want to locate the nearest ATM so that I can perform cash operations.	As a customer, I want to reset my password or recover my account, so that I can access if I forget my credentials.	

# **MVP ROADMAP**

Phase	Duration	Key Deliverables
Discovery & Planning	2 weeks	<ul> <li>Finalize requirements</li> <li>Define MVP scope</li> <li>Create wireframes and prototypes</li> </ul>
Core Development	6 weeks	<ul> <li>Develop core features (account management, transfers, security, etc.)</li> <li>Backend integration</li> </ul>

Testing & Refinement	3 weeks	<ul><li>Conduct user acceptance testing (UAT)</li><li>Fix bugs and refine features</li></ul>
Launch MVP	1 week	<ul><li>Deploy MVP to production</li><li>Monitor performance and gather feedback</li></ul>

## Prioritized Functionalities for MVP

Functionality	Features	Reason for Priority
Account Management	<ul><li>View account balance</li><li>View transaction history</li></ul>	Customers need to view and manage their finances effectively.
Transfers	<ul> <li>Transfer between own accounts</li> <li>Transfer to accounts in different banks</li> <li>View transfer history</li> </ul>	Transfers are a core banking operation and a major customer pain point.
Security & Authentication	<ul> <li>Secure login (biometric, PIN)</li> <li>Two-factor authentication (2FA)</li> <li>Password reset and account recovery</li> </ul>	Security is critical for gaining customer trust and ensuring compliance.
Performance & Availability	<ul> <li>Ensure 99.9% system availability</li> <li>Optimize system response time (&lt;2 seconds)</li> </ul>	A fast and reliable system is essential for customer satisfaction.
Payments	<ul><li>Pay utility bills</li><li>Pay credit card bills</li><li>View payment history</li></ul>	Paying bills is a common use case for digital banking users.

# KPI (Key Performance Indicator) for the MVP

As the client's goal is to increase digital platform usage and reduce customer complaints related to the inability to perform banking operations on mobile devices, here's a KPI that aligns with one of the primary goals of the project.

KPI	Definition	Target
Customer Adoption Rate	The percentage of existing online banking users who download and actively use the new mobile banking app within the first 3 months of implementation.  Formula:  Customer Adoption Rate = (Total Number of Online Banking Users / Number of Active Mobile App Users) × 100	Achieve a 30% adoption rate within the first 3 months.

## How to Track the KPI

## 1. Data Collection:

- o Track the number of downloads from app stores (Google Play, Apple App Store).
- o Monitor the number of active users.
- o Use analytics tools to gather data on user engagement.

## 2. Reporting:

- Generate reports on the adoption rate.
- o Share insights with stakeholders to assess progress toward the goal.

## 3. Improvement Actions:

- If the adoption rate is below target, perform user surveys or interviews to identify obstacles.
- o Implement improvements based on feedback.

# 3 Product Backlog Items (PBIs) with Complete User Stories

Below are 3 detailed user stories, including Description, Acceptance Criteria (AC), Wireframes, and Technical Requirements.

## **User Stories**

## 1. View Account Balance

**Description:** As a customer, I want to view my account balance on the mobile app, so that I can track my finances.

## **Acceptance Criteria (AC):**

- The account balance is displayed on the dashboard.
- The balance is updated in real-time whenever the user refreshes the screen.
- The balance is displayed in the local currency.
- If there are multiple accounts, the user can toggle between them to view individual balances.

• The balance is only visible after the user logs in securely.

## Wireframe:



## **Technical Notes:**

- The balance data will be fetched from the bank's core banking system via an API.
- Ensure the API response time is optimized to meet the 2-second performance requirement.

## 2. Transfer Between Own Accounts

**Description:** As a customer, I want to transfer money between my own accounts, so that I can manage my funds.

## **Acceptance Criteria (AC):**

- The user can select a source account and a destination account from a dropdown list.
- The user can enter the transfer amount.
- The user must confirm the transfer.
- The user can cancel the transfer.
- The transfer must be processed instantly, and the updated balances must be reflected in real-time.
- The user receives a confirmation message with a transaction ID after the transfer is successful.

## Wireframe:



#### **Technical Notes:**

- The transfer functionality will use the bank's existing backend API for inter-account transfers.
- Ensure the API is secure and complies with industry standards (e.g., encryption, authentication).

## 3. User Story: Credit Card Payment

**Description:** As a customer, I want to pay my credit card bill using the mobile app, so that I can avoid late fees and manage my debt effectively.

## **Acceptance Criteria (AC)**

- The user can select a credit card from a list of linked cards.
- The user can enter the payment amount.
- The user must confirm the payment with a secure authentication method (e.g., PIN or biometric).
- The user can cancel the payment.
- The payment must be processed instantly, and the updated credit card balance must be reflected in real-time.
- The user receives a confirmation message with a transaction ID after the payment is successful.

## Wireframe:



## **Technical Notes:**

- The payment functionality will use the bank's existing backend API for credit card payments.
- Ensure the API is secure and complies with industry standards (e.g., encryption, authentication).
- Integrate with the credit card system to fetch real-time balances and transaction details.

# Target Personas for XYZ Bank's Mobile Banking Product

## 1. Techie Professional

## **Demographics**

Age: 25–40

Occupation: Young professionals, entrepreneurs, or freelancers

#### Goals

- Manage finances efficiently.
- Perform banking transactions quickly.
- Access advanced features.

## **Pain Points**

- Limited time due to a busy schedule.
- Frustration with slow banking apps.
- Concerns about data security and privacy.

## **Behavior**

- Prefers mobile apps over desktop.
- Uses smartphones for most daily tasks.
- Expects an intuitive user experience.

## 2. Small Business Owner

## **Demographics**

• Age: 30-50

• Occupation: Owners of small to medium-sized businesses (e.g., retail shops, restaurants)

## Goals

- Manage business finances (e.g., payroll, vendor payments) efficiently.
- Access real-time account information to make decisions.
- Simplify cash flow management.

#### **Pain Points**

- Difficulty in tracking business expenses and income.
- Limited time to visit bank branches.
- Concerns about transaction fees and processing times.

#### **Behavior**

- Uses both mobile and desktop platforms for banking.
- Prefers apps with features adapted to business needs (e.g., bulk payments).
- Values reliability and security for business transactions.

## 3. Retiree

## **Demographics**

• **Age**: 60+

• Occupation: Retired

## Goals

- Access account information easily.
- Perform basic transactions (e.g., transfers, bill payments) without visiting a branch.

#### **Pain Points**

- Difficulty using complex digital platforms.
- Concerns about online security and scams.
- Limited familiarity with mobile apps.

## **Behavior**

- Prefers simple and intuitive interfaces.
- Relies on family or bank staff for technical support.
- Uses mobile apps for basic tasks but may still visit branches for complex transactions.

## 4. Student

## **Demographics**

• **Age**: 18–25

• Occupation: College or university students

#### Goals

- Manage limited finances effectively.
- Track spending and save money.
- Perform basic banking tasks (e.g., transfers, bill payments) easily.

## **Pain Points**

- Limited financial knowledge.
- Difficulty managing expenses.
- Frustration with apps that lack student-friendly features.

#### **Behavior**

- Highly tech-savvy and comfortable with mobile apps.
- Prefers apps with modern designs and social features (e.g., peer-to-peer payments).
- Uses smartphones for most daily activities.

## **SWOT Analysis of Top 3 Competitors**

To understand the competitive landscape for XYZ Bank's mobile banking product, we'll analyze the **Strengths**, **Weaknesses**, **Opportunities**, and **Threats** (SWOT) of three key competitors.

## Competitor 1: Competitor Bank A

#### **STRENGTHS**

- Established brand (well-known traditional bank).
- Offers a wide Range of Services (loans, investments, etc).
- Physical Presence: Extensive network of branches and ATMs, providing convenience for customers who prefer in-person services.

#### **WEAKNESS**

- Legacy Systems (outdated technology).
- High Fees (customers complaints).
- Poor User Experience: Mobile app and online banking platforms are not userfriendly.



#### **OPPORTUNITIES**

- Digital Transformation: Investing in modern technology to improve digital services.
- Partnerships: Collaborating with fintech companies to enhance offerings.
- Customer Education: Providing financial literacy programs to attract younger customers.

#### **THREATS**

- Fintech Disruption: Competition from agile fintech startups offering better digital experiences.
- Regulatory Changes: Increasing compliance requirements could strain resources.
- Customer Churn: Dissatisfied customers switching to competitors with better digital services.

## Competitor 2: Fintech Startup B

#### **STRENGTHS**

- Innovative Technology: mobile app with features like Al-driven financial insights and budgeting tools.
- Low Fees: Competitive pricing with minimal or no transaction fees.
- User-Centric Design: Intuitive and visually appealing app interface

#### **WEAKNESS**

- Limited Services: Focuses primarily on digital banking, lacking traditional services like loans or investments.
- Small Customer Base: Still building trust and brand recognition compared to established banks.
- No Physical Presence: Reliance solely on digital channels may alienate customers who prefer in-person services.

# OPPORTUNITIES

- Market Expansion: Targeting underserved markets, such as rural areas or younger demographics.
- Partnerships: Collaborating with traditional banks to offer hybrid services.
- Global Reach: Expanding internationally to tap into new markets

## **THREATS**

- Regulatory Challenges: Navigating complex financial regulations in different regions.
- Funding Constraints: Dependence on investor funding, which may dry up in economic downturns.
- Competition: Increasing competition from both traditional banks and other fintech startups.

## Competitor 3: Digital-only Bank C

#### **STRENGTHS**

- Fully Digital: No physical branches, resulting in lower operational costs.
- High Interest Rates: Offers attractive interest rates on savings accounts to attract customers.
- 24/7 Customer Support: Round-theclock support via chat, email, and phone.

#### **WEAKNESS**

- Limited Trust: Some customers are hesitant to trust a bank with no physical presence.
- Niche Market: Primarily appeals to tech-savvy customers, limiting broader adoption.
- Dependence on Technology: Vulnerable to technical issues or cyberattacks.

# SW OT

#### **OPPORTUNITIES**

- Customer Acquisition: Leveraging digital marketing to reach a global audience
- Innovation: Introducing new features like cryptocurrency trading or Aldriven financial planning.
- Partnerships: Partnering with ecommerce platforms to offer integrated financial services.

## **THREATS**

- Cybersecurity Risks: Increasing threat of data breaches and cyberattacks.
- Regulations: Compliance with evolving financial regulations could be challenging.
- Economic Downturns: Reduced consumer spending and saving during economic crises.

## **Product Vision**

"We want to give you a smooth, safe, and easy-to-use mobile banking app that makes managing your money simple, works for everyone, and builds trust. This way, you can reach your financial goals whenever and wherever you need to."

# **Product Backlog**

Below is the product backlog organized by priority according to the MoSCoW method.

## 1. Must-Have (MVP)

## **Functional Requirements**

- Account Management
  - View account balance.
  - View transaction history.

#### Transfers

- Transfer money between own accounts.
- Transfer money to accounts in other banks.
- View transfer history.

#### Payments

Pay credit card bills.

## • Security & Authentication

- o Secure login (biometric authentication, PIN).
- Two-factor authentication (2FA).
- Password reset and account recovery.

## • Performance & Availability

- o Ensure the app is available 99.9% of the time.
- Optimize app response time (<2 seconds).</li>

## **Non-Functional Requirements**

## Security

Encrypt all customer data.

## Accessibility

o Ensure the app meets accessibility standards (e.g., for visually impaired users).

## Cross-Platform Support

- Support both iOS and Android devices.
- Ensure compatibility with smartphones and tablets.

## 2. Should-Have (Post-MVP)

## **Functional Requirements**

- Cash Operations
  - Deposit cash via ATMs.
  - Withdraw cash via ATMs.
  - Locate nearest ATM.

## Payments

- o Pay utility bills (e.g. electricity, water).
- o Pay subscriptions (e.g., Netflix, Spotify).

## Notifications

o Send real-time alerts for transactions, low balances, and security updates.

## **Non-Functional Requirements**

## Scalability

 Ensure the app can handle a growing number of users without performance issues.

## Localization

Support multiple languages and currencies.

## Offline Mode

 Allow limited functionality (e.g., view balance, transaction history) without an internet connection.

## 3. Could-Have (Future Releases)

## **Functional Requirements**

## Investment Features

- Allow users to invest in funds or stocks.
- o Provide investment insights and recommendations.

## • Peer-to-Peer Payments

o Enable instant money transfers to friends and family.

## • Customer Support

o Integrate live chat or chatbot for customer support.

## **Non-Functional Requirements**

## Al Integration

o Use AI to provide personalized financial advice.

## 4. Won't-Have (Out of Scope)

## Cryptocurrency Trading

o Support for buying/selling cryptocurrencies.

## • Physical Branch Integration

Features requiring in-branch visits (e.g., loan applications).