첨부 2 2026 Financial AI Challenge — Functional Specification

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(* 필수항목)

1. MVP Scope*

Financial Bridge is a personal financial contingency-planning service designed to help users identify which expenses require attention first when an unexpected event makes it difficult for them to manage their financial lives directly.

The MVP uses synthetic transaction data representing a working professional living alone rather than real financial information. Gemini AI reviews three months of transaction history and initially classifies recurring payments such as credit-card bills, rent, insurance premiums, telecommunications expenses and subscriptions. Users can review these classifications, change labels when necessary, and modify the next payment date and amount. They can also exclude selected transactions from the calculation and classify each expense as either an **essential expense** or a **deferrable expense.**

The MVP includes four emergency scenarios: **14-day hospitalisation, temporary income interruption, smartphone loss and account protection, and emergency housing repair.** Depending on the scenario selected, the system reflects different conditions such as periods during which manual transfers may be difficult, delayed salary income or sudden additional expenses.

Exact dates and monetary amounts are not calculated directly by generative AI. To reduce the risk of numerical or date-related errors, a separate calculation module determines the relevant values first. Gemini AI then receives those confirmed results and converts them into plain-language explanations and 3-, 7- and 30-day action plans that can be understood by users with limited financial knowledge.

To make financial information easier to understand, the interface also uses a tiger mascot that changes according to the situation. During analysis, the mascot may appear with a magnifying glass or laptop; when attention is required, it displays a concerned expression; and once the plan is completed, it shows a positive expression. The intention is to help users recognise their current status more quickly through visual cues as well as text.

2. Key Features*

① Gemini AI Transaction Analysis

- Description: Reviews three months of recurring transactions and automatically classifies their financial purpose.

- Related Screen: Transaction Classification
- Implementation Status: Completed

② Manual Editing of Financial Schedules

- Description: Allows users to edit the starting balance, transaction label, next payment date, amount and whether the item should be included in the calculation.
- Related Screen: Review & Edit
- Implementation Status: Completed

③ Expense Priority Setting

- Description: Allows each expense to be classified as either an essential expense or a deferrable expense, and reflects that priority in the subsequent contingency plan.
- Related Screen: Review & Edit
- Implementation Status: Completed

④ Four Emergency Scenarios

- Description: Allows users to select one of four scenarios—14-day hospitalisation, income interruption, smartphone loss and account protection, or emergency housing repair—and performs calculations based on the selected situation.
- Related Screen: Emergency Scenario Selection
- Implementation Status: Completed

⑤ Date-Based Balance and Shortfall Calculation

- Description: Applies the user's latest inputs chronologically to calculate the first date on which funds become insufficient and the amount required.
- Related Screen: Financial Contingency Plan / Detailed Calculation View
- Implementation Status: Completed

⑥ Gemini AI Contingency-Plan Generation

- Description: Uses the confirmed calculation results and the user's priorities to present immediate actions and 3-, 7- and 30-day plans in plain language.
- Related Screen: Financial Contingency Plan
- Implementation Status: Completed

⑦ Scenario-Based Mascot Guidance

- Description: Displays a mascot appropriate to the current state—such as analysis in progress, attention required or plan completed—so that users can intuitively understand the stage of the service and any important issues.
- Related Screens: Transaction Analysis, Emergency Scenario Selection, Financial Contingency Plan Results
- Implementation Status: Completed

3. User Flow*

① Try the Sample

Users can access the deployed URL and begin using the sample immediately with synthetic data, without creating an account or using a test login.

② Review AI Transaction Analysis

Gemini AI reviews the previous three months of transaction history and classifies recurring

financial schedules. Users first review the categories assigned by the AI, such as credit-card payments, rent, insurance premiums and telecommunications expenses.

③ Review and Edit

If a classification does not reflect the user's actual situation, the label can be changed manually to categories such as Other or Needs Review. Users can also modify the next payment date and amount, or exclude an item from the current calculation. Each outgoing payment can be designated as either an essential expense or a deferrable expense, allowing the user's own priorities to be reflected in the plan.

④ Select an Emergency Scenario

The user then selects one of four scenarios: 14-day hospitalisation, income interruption, smartphone loss and account protection, or emergency housing repair. Different assumptions are applied depending on the selected scenario, including periods during which manual transfers may be difficult, delayed salary payments or additional repair costs.

⑤ Review the Financial Contingency Plan

When the user selects Create Contingency Plan, the system performs the calculation using the latest values entered by the user and the selected emergency scenario. The results screen first shows the most urgent issue and the amount required, followed by immediate actions and the 3-, 7- and 30-day action plan. If the user wants to understand how the figures were calculated, the View Detailed Calculation section displays the change in available funds by date. A scenario-appropriate mascot is also shown to help the user quickly understand the current stage and any areas requiring attention.

4. AI and Data Processing*

The MVP does not use personal information such as resident registration numbers, bank account numbers or actual financial transaction histories. The demonstration uses a synthetic case representing a person living alone, with a reference date of **September 7, 2026** and a starting balance of **KRW 1,330,000.**

Gemini AI is used in two main areas. First, it classifies the nature of recurring transactions. Second, once the emergency-scenario calculation has been completed, it converts the results into an action plan that is easier for the user to understand.

Dates and monetary amounts, however, are handled by a separate calculation module. This design reduces the risk that generative AI may produce incorrect numbers or dates through hallucination. The calculation module first confirms the starting balance, payment dates, amounts and inclusion settings entered by the user, while Gemini AI focuses on explaining those values without altering them.

Transaction labels are also separated from the underlying attributes required for calculation. For example, even if the user changes the visible label of a salary transaction to **Other**, the system still recognises the underlying transaction as salary, allowing the income-interruption scenario to calculate the delay correctly. A validation process is also included so that if a number generated in an AI-written sentence does not match the deterministic calculation result, that sentence is not displayed in the final output.

5. MVP Validation*

The MVP was designed so that major features can be tested immediately through the deployed URL without a separate test account.

The default sample includes a credit-card payment of **KRW 900,000**, rent of **KRW 650,000**, an insurance premium of **KRW 82,000**, a telecommunications bill of **KRW 69,000**, a Netflix payment of **KRW 17,000**, a gym membership of **KRW 55,000**, and salary income of **KRW 2,700,000**.

When the default **14-day hospitalisation** scenario is selected, the balance falls to **KRW 430,000** after the KRW 900,000 credit-card payment on September 10. When the KRW 650,000 rent payment is then applied on September 15, the user faces a **KRW 220,000 shortfall.** The results screen should therefore display guidance such as, **"You may need an additional KRW 220,000 to pay your rent on September 15."**

Users can also change the starting balance, transaction labels, payment dates, amounts, calculation-inclusion settings and expense priorities. After changing these values, they can select a different emergency scenario and confirm whether the results are recalculated based on the user's latest inputs.

- Environment and Access: PC Chrome / Mobile Browser; no registration or test account required
- Limitations: The MVP uses synthetic data and does not execute real financial transactions such as transfers or automatic payments.