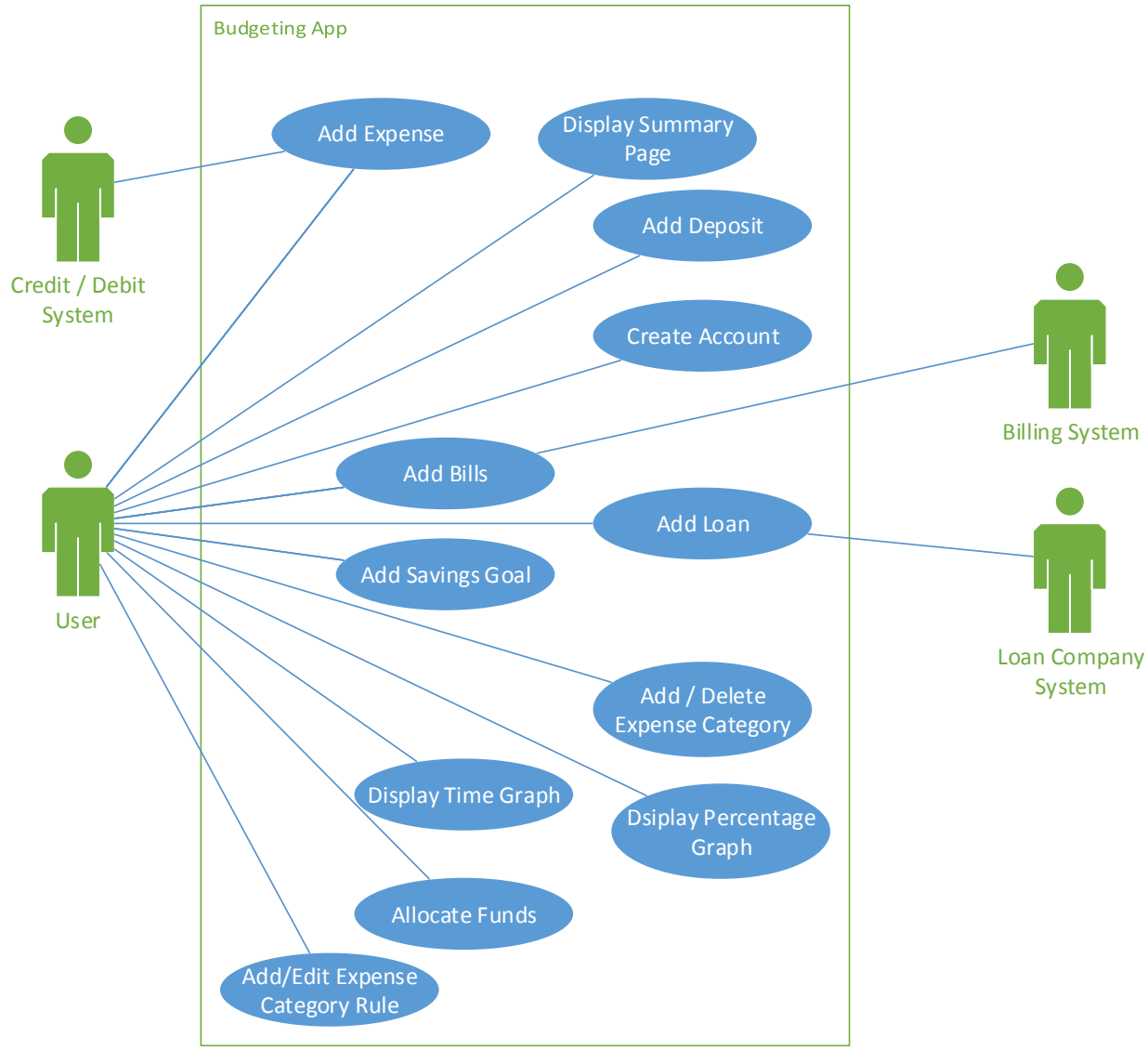
UML Use Case Model

Use Case Diagram



Use Case 1: Create Account

Scope: Budgeting Application

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: Wants to create an account for initial use of the application.

Preconditions: User has opened the application or gone to the web URL.

Success Guarantee: User account is saved and user may begin utilizing other features of the software.

Basic Flow:

1. User presses “Create Account” button.
2. On the following page, user fills out the form with name, email, and desired password.
3. System checks to see if email has not already been used.
4. Account has been created and saved, and user is taken to Summary Page.

Alternative Flow:

1. User presses “Create Account” button.
2. On the following page, user fills out the form with name, email, and desired password.
3. System finds that the given email has already been used.
4. User is notified that the email entered is already in use, and to enter a different one.
5. User enters a new email.
6. System checks and verifies it has not been used.
7. Account has been created and saved, and user is taken to Summary Page.

Frequency of Occurrence: Once per user

Use Case 2: Add Expense

Scope: SmartChart

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: wants to accurately and conveniently record any expense made.

Preconditions: User is logged in to the application.

Success Guarantee: Expense has been recorded and accurately deducted from account total and category total, and these values are updated to reflect the change.

Basic Flow:

1. User presses “Add Expense” button from the Summary Page.
2. User enters price and chooses category from a drop-down list.
3. Once user hits “OK,” they are taken back to the summary page with totals updated.

Frequency of Occurrence: Varies.

Use Case 3: Add Deposit

Scope: SmartChart

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: wants to accurately and conveniently record any deposit made.

Preconditions: User is logged in to the application.

Success Guarantee: Deposit has been recorded and totals have been updated accurately.

Basic Flow:

1. User presses “Add Deposit” button from the Summary Page.
2. User enters total value of the deposit and hits “OK.”
3. System adds deposit information to database.
4. Summary Page is loaded with updated totals.

Alternate Flow (allocate funds):

1. User presses “Add Deposit” button from the Summary Page.
2. User enters total value of the deposit and hits “OK.”
3. System uses allocation rules to apply funds to categories
4. System adds deposit information to database.
5. Summary Page is loaded with updated totals.

Frequency of Occurrence: Varies, typically once a week or less often.

Use Case 4: Display Dashboard

Scope: SmartChart

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: wants an accurate representation of finance summary and recent activity.

Preconditions: User is logged in to the application.

Success Guarantee: Summary information is displayed accurately.

Basic Flow:

1. User clicks on dashboard link from menu bar.
2. System pulls information from database to make sure all information is current.
3. Summary Page is loaded with accurate totals and graphs.

Frequency of Occurrence: Very often, as this is the homepage of the application.

Use case 5: Add Bill

Scope: SmartChart

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: wants to record reoccurring bills and rely on the application to schedule them correctly.

Preconditions: User is logged in to the application.

Success Guarantee: Bill has been recorded and accurately scheduled to be deducted on the correct date.

Basic Flow:

1. User clicks the Bills link from dashboard and is taken to the Bills page.
2. User clicks “Add Bill” button.
3. User inputs name of bill, amount, start date, and frequency of occurrence.
4. System adds this information to the database.
5. Bills page is updated with new information.

Alternate Flow:

1. User clicks the Bills link from dashboard and is taken to the Bills page.
2. User clicks “Add Bill” button.
3. User inputs name of bill, amount, start date, and frequency of occurrence.

4. One or more fields is empty or invalid, and system alerts user to enter valid information.
5. Once all entries are validated, Bills page is updated with new information.

Frequency of Occurrence: Varies, seldom after initial bills are created.

Use Case 6: Add Loan

Scope: SmartChart

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: wants to record loans and rely on the application to schedule payments correctly.

Preconditions: User is logged in to the application.

Success Guarantee: Loan has been recorded and accurately scheduled to be deducted on the correct date.

Basic Flow:

1. User clicks the Loans link from dashboard and is taken to the loans page.
2. User clicks “Add Loan” button.
3. User inputs name of loan, amount, start date, end date, interest rate, and frequency of payment.
4. System calculates monthly payment and adds loan information to the database.
5. Loans page is updated with new information.

Alternate Flow (calculate end date):

1. User clicks the Loans link from dashboard and is taken to the loans page.
2. User clicks “Add Loan” button.
3. User inputs name of loan, amount, start date, interest rate, and desired monthly payment.
4. System calculates end date and adds loan information to database.
5. Once all entries are validated, Loans page is updated with new information.

Invalid input:

1. User clicks the Loans link from dashboard and is taken to the loans page.
2. User clicks “Add Loan” button.
3. User fails to input either name of loan, amount, start date, interest rate, and either end date or monthly payment.
4. System alerts user which entries are invalid.

5. User re-enters data.
6. Once all entries are validated, system calculates either end date or monthly payment and saves loan to database.
7. Loans page is updated with current information.

Frequency of occurrence: Seldom, only once per loan.

Use Case 7: Add Savings Goal

Scope: SmartChart

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: wants to record savings goal and rely on the application to schedule contributions correctly.

Preconditions: User is logged in to the application.

Success Guarantee: Savings goal has been recorded and accurately scheduled to be contributed to as the user specifies.

Basic Flow:

1. User clicks the Savings link from dashboard and is taken to the savings page.
2. User clicks “Add Savings Goal” button.
3. User inputs name of goal, start date, amount of each contribution, and optionally: target amount, end date, interest rate, and frequency of contribution.
4. System calculates any missing information and adds saving information to the database.
5. Savings page is updated with new information.

Alternate Flow:

6. User clicks the Savings link from dashboard and is taken to the savings page.
7. User clicks “Add Savings Goal” button.
8. User fails to input one of the required fields.
9. System alerts user that one or more entries are invalid.
10. User re-enters information.
11. Once entries are validated, system calculates end date and adds loan information to database.
12. Once all entries are validated, savings page is updated with new information.

Frequency of occurrence: Occasionally, not very frequent.

Use Case 8: Add / Delete Expense Category

Scope: SmartChart

Level: user goal

Primary Actor: User

Stakeholders and Interests:

- User: wants to edit expense categories quickly and conveniently.

Preconditions: User is logged in to the application.

Success Guarantee: Expense categories are updated and accurately displayed.

Basic Flow:

1. User clicks “Add / delete expense categories” button from the Summary Page.
2. System displays category page with current categories listed.
3. User clicks “Add Category” button.
4. System prompts user to input category name
5. Category is added to database
6. Category page is loaded with updated categories.

Alternate Flow (delete):

1. User clicks “Add / delete expense categories” button from the summary page.
6. System displays category page with categories listed.
7. User checks the box next to one or more categories, then hits the delete button.
8. System updates database.
9. Category page is updated with selected categories removed.

Frequency of Occurrence: Occasionally.

Brief Use Cases

Allocate Funds: Here, the user can choose to allocate part of a deposit, whether it be a flat amount or a percentage, to some or all of the expense categories. The user can also add/subtract funds already allocated to specific categories.

Display Time Graph: Graphical representation of the increase / decrease in funds over time. The user can choose the time span and organize by category, month, etc.

Display Percentage Graph: Graphical representation of the percentage of expenses from each category. This can also be edited to reflect different time periods.

Add/Edit Expense Category Rule: The user can define rules and weights to the various categories so certain categories are prioritized over others.