Gui Budget Program Design Documentation

**Summary:** A program that automates and displays useful financial data to the user to assist in monthly expense and income tracking, provide tax projections, and show investment portfolio growth.

**Context**: Need practical experience building projects for my portfolio and would like more flexible and powerful tools for managing budgets and investments.

**Goals**:

1. Easy to use application where any user could create and work with the program without prior knowledge of the system
2. Flexibility to add in new features and systems without breaking existing architecture
3. Automated budget creation based on prior metrics

**Non-Goals**:

1. AI integration
2. Network Capability

**Milestones**:

1. Expense Tracking
2. Income Tracking
3. Budget Tracking
4. Graph implementation
5. Tax Implementation
6. Investment Implementation

**User Stories:**

1. As a user I want to be able Save and Load my spreadsheets
2. As a user I want to be able to see my yearly expense and income patterns
3. As a user I want to be able to adjust my formulas to tailor my budgets to my specific needs
4. As a user I want to quickly and easily see an overview of my finances for a given time period
5. As a user I do not want to lose my data if the program closes unexpectedly
6. As a user I want to see recommendations on how I could improve my finances

**Requirements and Specifications:**

1. All Budgets shall have configurable time frames
   1. 1 day, 1 week, 1 month, 1 year
   2. Specific Month
   3. Specific Week
2. All Expenses shall be able to be categorized
   1. Bills,Ongoing,One-Time, Extra
   2. [Categories](https://localfirstbank.com/article/budgeting-101-personal-budget-categories/)
3. All Budgets shall be defined by a formula
   1. Simple Moving Average, Linear,Custom
4. Graphs shall use inputted data
   1. Active sheet, expenses, budget
5. The application shall auto save
   1. Every 3 minutes
6. Expenses/Income shall display total sums
   1. Total sums for Time periods
   2. Total sums for Types of transactions/income
7. The application layout shall be scaled to screen size
   1. The application layout shall not be adjustable otherwise
8. Expenses can come from the budget or savings
   1. This shall be a check box
9. Income and Expenses shall be searchable
   1. By Date, Type, Name, Amount,Savings
   2. Month, week, day, year
10. The Budget can be manually set or automated
    1. It can be automated if 1 full period of previous income and expenses is available
11. Graphs shall display data over time
    1. Always from oldest to newest
12. The application shall not lock up
    1. Views shall be concurrent to prevent deadlocking

