

Expense TRACKER APP DP

Auth firebase we can use **Strategy** Support multiple login types (email, Google, etc.)

Track Budget & Spending; using specification pattern it allows me to 👍:

- Check if a spending category is within budget.
- Evaluate if a transaction should trigger a warning (e.g., "approaching limit").
- Apply multiple rules together (e.g., "Groceries under \$200 AND Total Monthly Spending under \$1000").
- Let users define **custom budget rules** later (e.g., "Alert me if dining out exceeds \$100 in a week").

Transaction Processing we will use **Chain of Responsibility** i don't know it much so this is what i had from chatshot as a workflow

ValidationHandler

- Checks if the transaction is valid (non-zero amount, valid date, etc.)
- If invalid → stop chain and show error

DuplicateCheckHandler *(optional)*

- Checks if this transaction already exists (prevents duplicates)

CategoryAutoAssignHandler

- If the user didn't choose a category, try to auto-assign (e.g., keywords like "Uber" → Travel)

BudgetLimitCheckHandler

- Checks if this transaction will push the category over its budget
- If it does, flag it or notify user

AlertHandler / LoggerHandler

- Maybe logs the transaction or triggers alerts

FinalSaveHandler

- Saves the processed transaction to the database