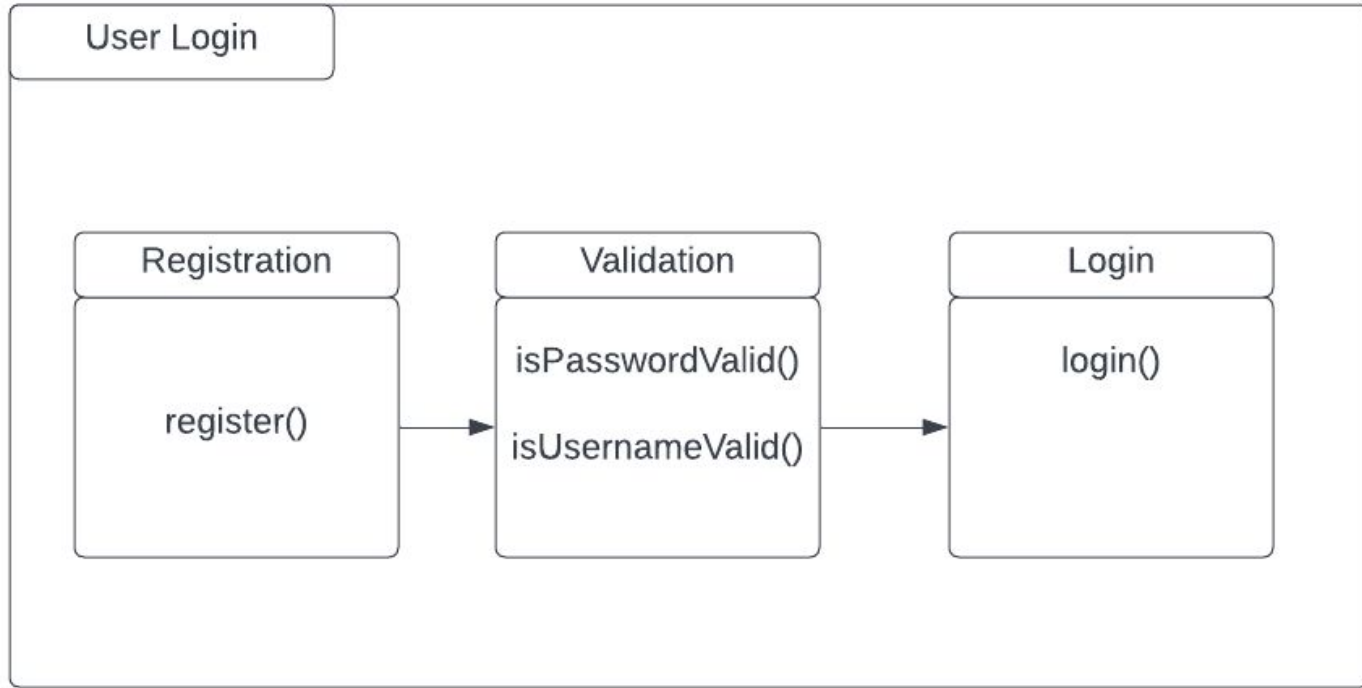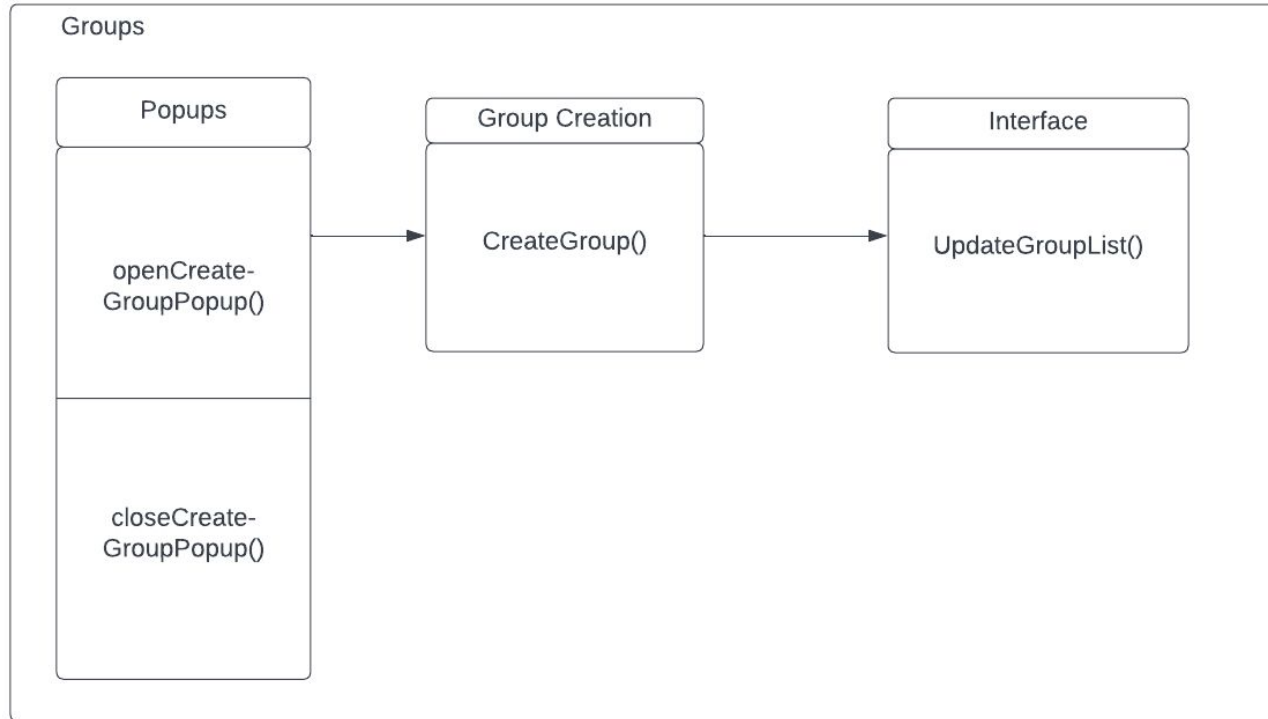# Implementation and testing

Group: Shahd Mustafa, Mike Nasser, Nathaniel Leonardo,
Hassan Radwan, Hussen Al-Jubury
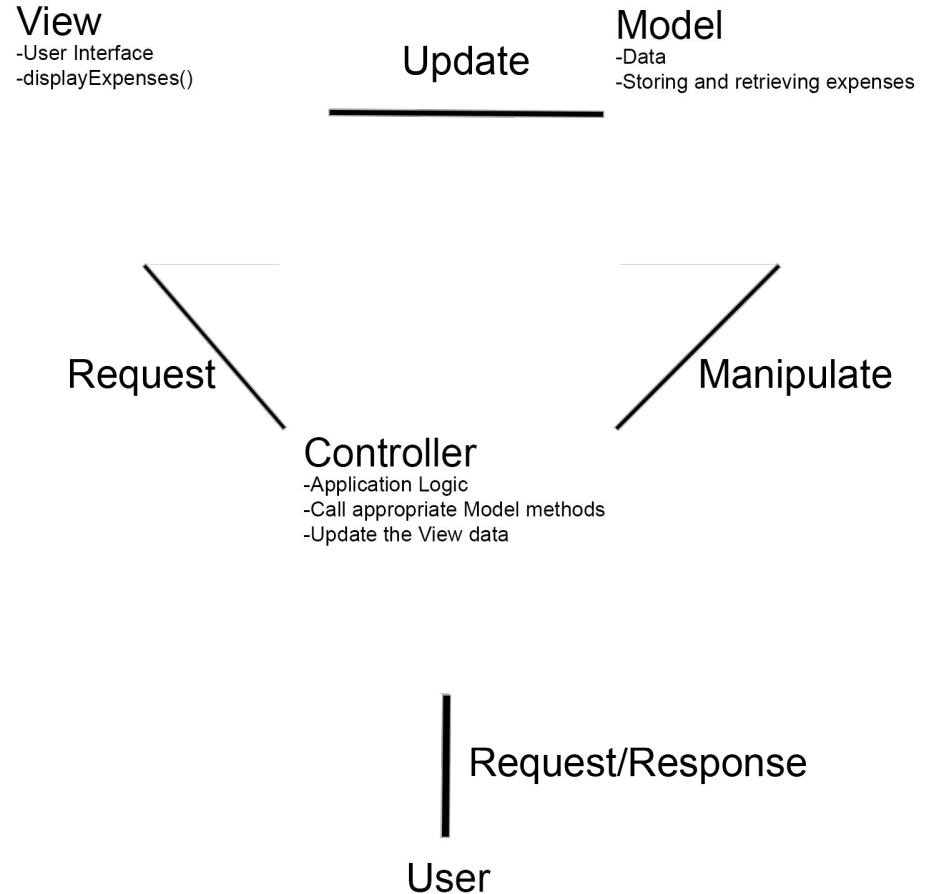
User login

Group management

Expense creation

View
-User Interface
-displayExpenses()

Update

Model
-Data
-Storing and retrieving expenses

Request

Manipulate

Controller
-Application Logic
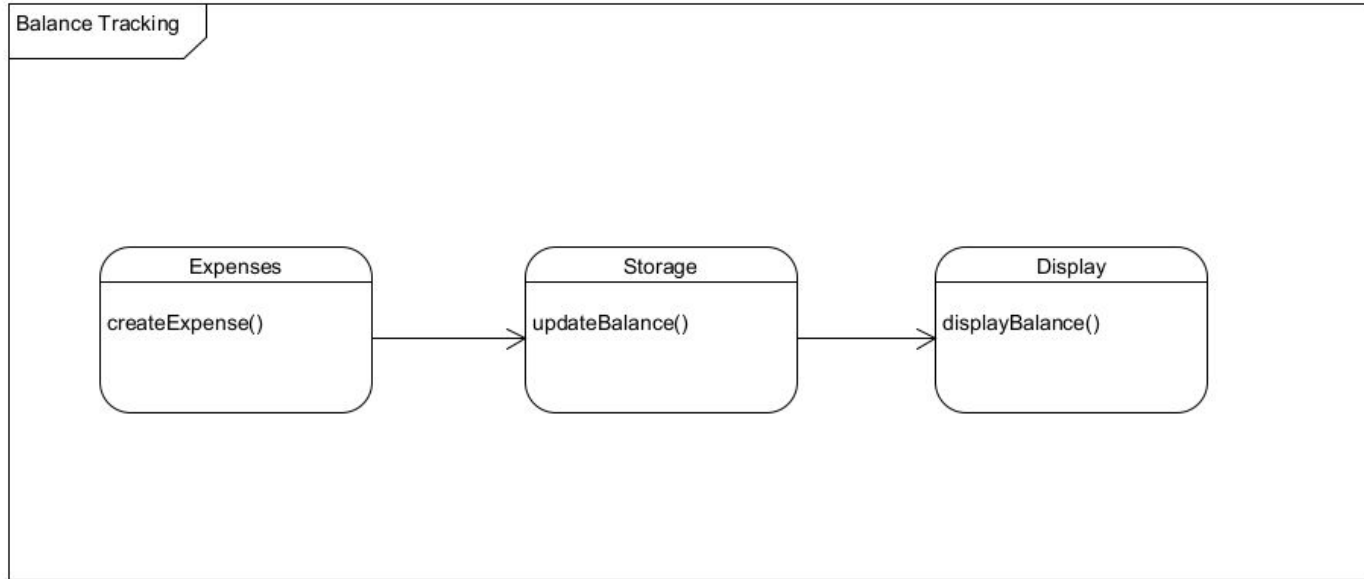-Call appropriate Model methods
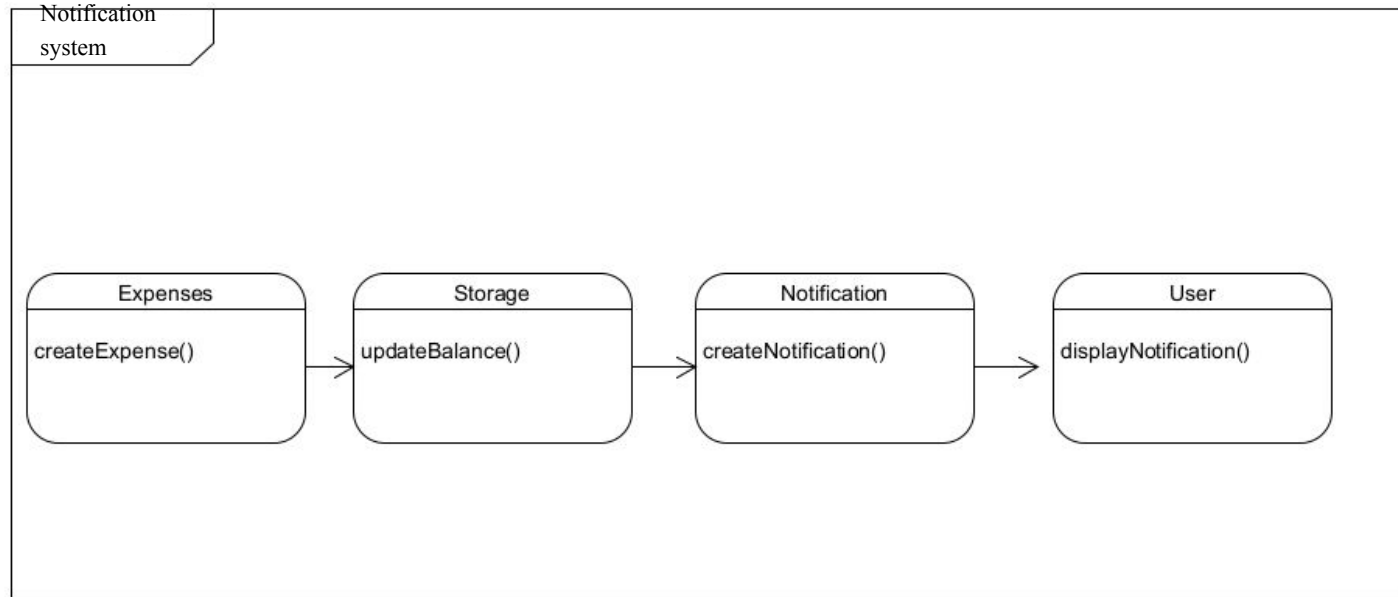-Update the View data

Request/Response

User

Balance tracking

Notification system
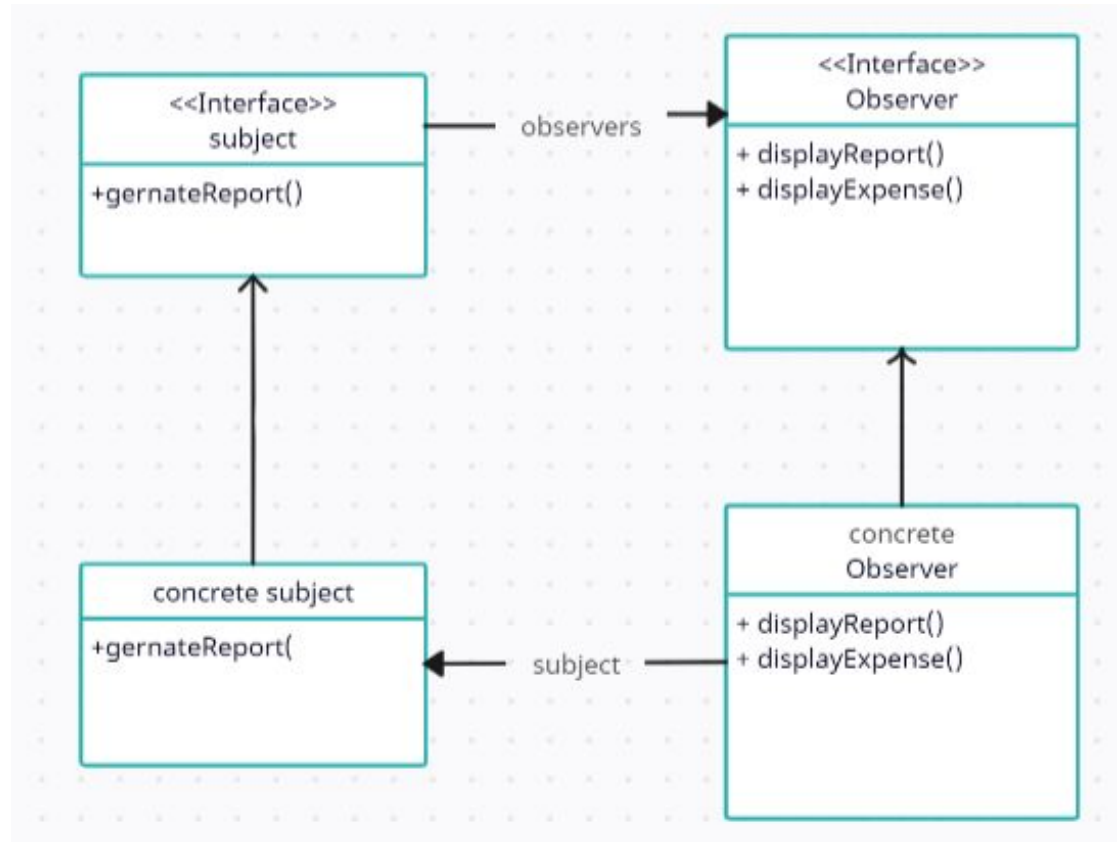
Payment tracking

- Fulfill ongoing payments
- Update balance
- Design pattern:
  - Observer
  - Singleton

```javascript
// expense payment popup
function paymentExpense() {
const expenseSelect = document.getElementById('expenseSelect');
expenseSelect.innerHTML = '<option value="">Select an expense</option>';

expenses.forEach((expense) => {
  if (expense.paymentStatus === 'Pending') {
  const option = document.createElement('option');
  option.value = expense.id;
  option.textContent = `${expense.description} ($$${expense.amount})`;
  expenseSelect.appendChild(option);
  }
});
}
```
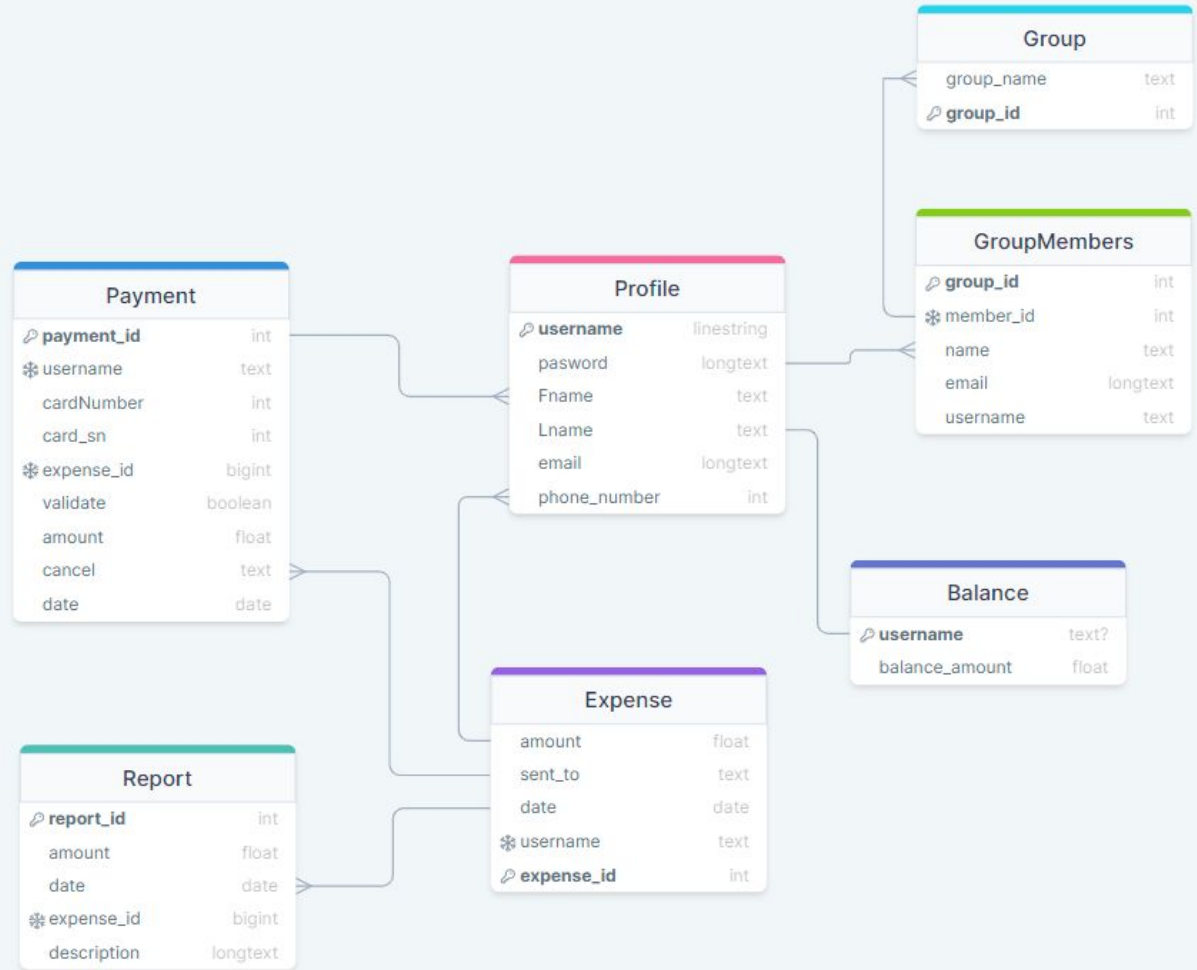
Report

- General report
  - Report of all expense.
- Custom report
  - User inputted date.
- Design pattern:
  - Observer pattern

Database schema

Tests cases

Feature testing	Description	Input data	valid/ invalid data	Expected output	Output data	Pass / fail
User login - registration	Valid username and password inputted	Username: Shahdmustafa1 Password: Shahdmustafa12!	valid	"Registration successful! You can now login."	"Registration successful! You can now login."	PASS
User login - registration	Invalid username and password inputted	Username: Shahdmustafa Password: Shahdmustafa12	invalid	"Invalid username or password. Please try again."	"Invalid username or password. Please try again."	PASS
Group management	Upon clicking "create group" button on dashboard, a popup will display prompting users for numerous inputs	Text, drop window selection	valid	Popup is displayed to user with input prompts	Popup is displayed to user with input prompts	PASS

Feature testing	Description	Input data	valid/ invalid data	Expected output	Output data	Pass / fail
Report - general	Past expenses are to be displayed in the popup window. All components should appear.	General button selection	Valid	General button selected (previously created an expense)	Amount: $90 Sent to: shahd Date: Description: lunch. Approval Status: Pending	FAIL (date is missing)
Balance Calculating	It should perform the proper calculations and show the balance either owed or is owed to the user.	Create expense button	Valid	50	Amount: $100 Sent to: Hussen Date: 2023 - 07 - 31 Description: lunch. Split %: 50	PASS