UFC-201: Income/Expense Chart

The following document will go over the design of XXX, as outlined in Story ticket UFC-XXX.

Acceptance Criteria

For reference, the following are the acceptance criteria for this ticket:

- I want to see a stacked bar chart of my income/expenses over time.

- I want to see my current amount of expenses and my previous amount of expenses, and the change between them.

- I want to see my current amount of income and my previous amount of income, and the change between them.

Design Brainstorming

OK, so as usual for a chart, there are three parts that we're gonna need:

i.   The source data.

ii. The data transformation.

iii. And the chart layout itself.

Source Data

So, how do we calculate income and expenses over time? I think this should be fairly straightforward: lookup all the transactions in the date period and filter them into two groups, income and expenses. Then just feed each group into the data point generator, cause we're gonna need 2 data sets (one for each bar).

The 'From' balances can just be taken from the Account Summaries.

Data Transformation

I think all we need to do is pass each income/expense transaction set into `generateDateAmountData`, with the reducer just setup as a sum-er, since we only need to sum the transactions for each type.

Actually, no. This is completely wrong. This is a *bar* chart, not a line chart; we want each data point to be independent (i.e. just for that date interval), not an accumulation. As such, we actually want the reducer to *ignore* the 'starting' balance that gets passed in, and use 0. I think we could get away with just making the reducer ignore the starting balance and force

0, instead of making `generateDateAmountData` optionally pass 0 instead of the running balance.

- Nope, we will have to modify it to accept this as a separate case. Why? Because when there are no transactions, it defaults to use the last interval's amount. So we can't exactly control this behaviour just from our reducer.

Chart

Well, now it's time to build a different kind of chart: a bar chart. And not just any bar chart, a *stacked* bar chart. That means that we're gonna need new chart stuff. We can probably re-use most of it, so there'll just be more components to extract, but it should (hopefully) be relatively straightforward to create a stacked bar chart: green for income, red for expenses.

Component Breakdown

Atoms

- N/A

Molecules

- N/A

Organisms

- N/A

Scenes

- [modification] Dashboard (add the IncomeExpenseChart)

Charts

- IncomeExpenseChart

Tasks

- Create the `IncomeExpenseChart`.