Home Page

Barlow Budgets

$500

Fun Money

Shows the current leftover amount in the default budget

[Enter Expense](#)

Most important link front and center

[Pay Day!!](#)

Instead of going through the pain of creating a system to automate and properly guess at when a user got paid, let them get the dopamine hit of pressing this button!

Recent Spending

Highchart.js graphing stuff here

This will be like a quick stock style graphing chart over the past month's worth of spending

Might possibly want the nav tabs on top since submit buttons will be on buttoms of pages

| Enter Expense | Budget | History | Funds |

Enter Transaction

$0.00

This textbox is always filled in with zero dollars to start.

Budget

Fun Money ▼

This dropdown is always filled in with the "default" budget selected. Making it easier to add the most common expense fastest.

Date

7/10/2022

This textbox is a date field (using the built in HTML5 datepicker) and will default to today's date.

Description

Video Gamez!

SUBMIT

| Enter Expense | Budget | History | Funds |

Pay Day

Pay Day!!

Make sure this page is very pretty and fun for maximum user dopamine

Job ▼

This dropdown lets you select the income source you just got paid by.

Date

7/10/2022

This textbox is a date field (using the built in HTML5 datepicker) and will default to today's date.

SUBMIT

Enter Expense | Budget | History | Funds

Budget

Budget

Income

| Name... | Amount... | Bi-weekly ▼ |

Users can enter in how much money is in each paycheck and when they get those paychecks (monthly, weekly, bi-weekly)

Hidden feature: if there is already a value in the amount field, changing the timeframe will modify the value. That way I can easily plug in a yearly salary and convert to bi-weekly without any extra work.

(+) Users can have more than one source of income.

Budget Plan | Bi-weekly ▼

Users can select what timeframe their budget lasts for. Changing this after entering budget data will cause the dollar amounts to be recalculated.

Default | Fun Money ▼

Users can select a (default) budget. This budget is the one that gets shown initially on the budget entry screen. This default budget will also display on the homescreen for quick decision making.

Surplus | Fun Money ▼

Users can select a Suplus budget that automatically has all surplus funds added to it each paycheck after all other budgets have been subtracted from the paychek by percent (this prevents rounding errors)

Budget Name	Dollar Amount	% of Budget	Default Expense	
Fun Money	$500	5%	Video gamez!	(−)
Gas	$500	5%	Gas	(−)
Budget 2	$500	5%		(−)

Users can create a default expense description so selecting a budget like "Gas" always enters "Gas" as the description. I certainly don't care which gas station I went to on 3/10/2016.

(+)

Save

| Enter Expense | Budget | History | Funds |

History

History

Budget	Amount	Description	Date	Edit
Eating Out	$12.79	Taco Bell	7/1/2022	✏
Fun Money	$2.09	Morbius	7/2/2022	✏
Gas	$60.76	Gas	7/3/2022	✏
Eating Out	$12.79	Taco Bell	7/1/2022	✏
Fun Money	$2.09	Morbius	7/2/2022	✏
Gas	$60.76	Gas	7/3/2022	✏
Eating Out	$12.79	Taco Bell	7/1/2022	✏
Fun Money	$2.09	Morbius	7/2/2022	✏
Gas	$60.76	Gas	7/3/2022	✏
Eating Out	$12.79	Taco Bell	7/1/2022	✏
Fun Money	$2.09	Morbius	7/2/2022	✏
Gas	$60.76	Gas	7/3/2022	✏
Eating Out	$12.79	Taco Bell	7/1/2022	✏
Fun Money	$2.09	Morbius	7/2/2022	✏
Gas	$60.76	Gas	7/3/2022	✏

Users can click the edit icon to amend any previous spending information (going back as far as they want!) and then all budget information will be recalculated from there (only recalculate budget leftover amount once users asks for it, can simply mark the affected budget as "dirty" to indicate all calculated metrics from it must be recalculated on next request)

| Enter Expense | Budget | History | Funds |

Edit Transaction

Edit Transaction

$49.99

Budget

Fun Money ▼

Date

4/9/2007

Description

Super Paper Mario

SUBMIT

| Enter Expense | Budget | History | Funds |

This UI will be the same as the transaction entry UI. Just with values already filled in from an actual expense entry of course.

Funds

Funds

Budgets	Leftover
Fun Money	$500
Gas	$500
Budget 2	$500

Budget Spending 7/10/2022 to 7/10/2022

Highchart.js graphing stuff here

Just need a way to visualize spending vs budget amount at a point in time. Multiple lines with one per budget category. Retains all historic budgets if for some reason one is ever deleted. That budget just ends on the day it was deleted. Make sure we get piecharts!

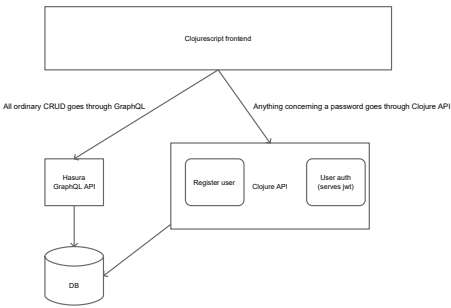| Enter Expense | Budget | History | Funds |

Architecture

Clojurescript frontend

All ordinary CRUD goes through GraphQL

Anything concerning a password goes through Clojure API

Hasura
GraphQL API

Register user

Clojure API

User auth
(serves jwt)

DB

DB Schema

user

pk		
☑	id	bigint
☐	name	string
☐	password	text
☐	salt	string
☐	budget_timeframe	bigint

budget

pk		
☑	id	bigint
☐	user_id	bigint
☐	name	string
☐	amount	money
☐	default_message	string

budget_value

pk		
☑	budget_id	bigint
☐	value	money

Holds the computed cached value of a user's budget. This value is recalculated using a trigger on every insert/update/delete on the transaction table.

timeframe

pk		
☑	id	bigint
☐	name	string

May be a bad idea, but for now timeframe table will supply timeframe types used both by the paycheck timeframe and the budget_timeframe. Or should we use a daterange system?

default_budget

pk		
☑	user_id	bigint
☐	budget_id	bigint

surplus_budget

pk		
☑	user_id	bigint
☐	budget_id	bigint

Budget defaults and surplus aren't technically necessary so they get to be their own table. A user can force themselves to have to select a budget every time they enter an expense and also need to perfectly balance their checkbook manually before saving if they realllyyy want to.

income

pk		
☑	id	bigint
☐	name	string
☐	amount	decimal
☐	timeframe_id	bigint

transaction

pk		
☑	id	bigint
☐	budget_id	bigint
☐	amount	money
☐	date	datetim
☐	description	string
☐	automated	boolean

We could also replace the last_updated column on the budget_value table with a valid column and simply set it to false whenever this table gets updated. Then the cache just checks that flag and there's no datetime checking.
I think we really should do this. It's only one extra trigger and lets me avoid datetime calculations.

This table also holds all credits to a budget as well. These get created automatically for the correct amounts when a user hits "Pay day!" but also just makes the system work when a specific budget should get filled with a credit (like a gift or tax return going into one specific budget)
The automated column specifies that a row was added in by the payday system and should not be allowed to be edited