
NEW MEXICO TECH (Fall 2021)

Semester Project CSE 321: Internet & Web Programming

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This project is based around providing financial statistical analysis, because most banking websites are difficult to use, and don't give you the tools to do a post-observation of your budget.

1 Five Websites That are Relevant to the Theme:

1.1 PocketGuard

Pocket Guard has the following features:

- List savings, checking and credit accounts
- Offers free in-app savings account
- percentage of spending breakdown by month as
- Spending by month as a line, compare months
- create own hashtags for analysis
- spending percentages by merchant by month
- automatically finds regular bills and pays checks
- set budget goals category, and total
- shows net cash after budget goals
- saving goals (ie save for purchase)
- calculates net worth
- displays transaction
- displays opportunity for savings, (ie better phone plan)

1.2 Mint

- Automatic transaction tagging
- Budgeting
- Set spending goals
- Aggregation of multiple accounts

- Net worth tracking
- Advanced Analytics
 - Monthly Income to spending ratio
 - Spending Habits

1.3 You Need a Budget (YNAB)

You Need a Budget (YNAB) has the following features:

- Focuses on living off of last months paycheck.
- set budgets
- create own hashtags for analysis
- shows net cash after budget goals
- Larger categories with smaller subdivisions

1.4 EveryDollar

- Budgeting
- Debt Tracking
- Premium membership allows users to automatically tack transactions from their bank
- Percentage Breakdown of Budget (not actual amount spent)
- Requires an every dollar budget

1.5 Goodbudget

- Budgeting
- Debt Tracking
- Manually add Transactions (Not automatic)
- Shows Advanced Analytics
 - Percentage Breakdown of Amount Spent

- Spending vs Budget
- Income vs Spending

2 Functionality descriptions

2.1 Tagging

The ability to mark certain transactions as belonging to one or more categories.

2.2 Budgeting

The ability to set a limit to the amount of money to be spent in a category.

2.3 Percentage Breakdown

The ability to review spending and determine what percent of spending was spent in a particular category.

2.4 Spending Habits

The ability to track previous purchases to provide heuristical data about spending. (You've spent 10\$ on coffee this month, less than your average of 15\$)

2.5 Automatic Tracking

The ability to add new transactions to the account without user input.

2.6 Account Aggregation

The ability to access multiple accounts and view combined analytics.

2.7 Our Website VS Existing Websites:

	FinTool	Mint	PocketGuard	YNAB	EveryDollar	Goodbudget
Tagging	V	O	V	O	V	V
Budgeting	V	O	V	V	V	V
Percentage Breakdown	V	V	X	X	V	V
Spending Habits	V	V	X	X	V	V
Automatic Tracking	X	V	V	V	V	X
Account Aggregation	V	V	V	V	X	V

3 Storyboard:

3.1 Target Audience:

Our typical customers can be divided into two groups, personal users, and business users. In order to better shape the user stories, we are going to make some broad generalizations about these groups. Additionally, certain tags will automatically be generated or applied differently.

3.1.1 Personal Users

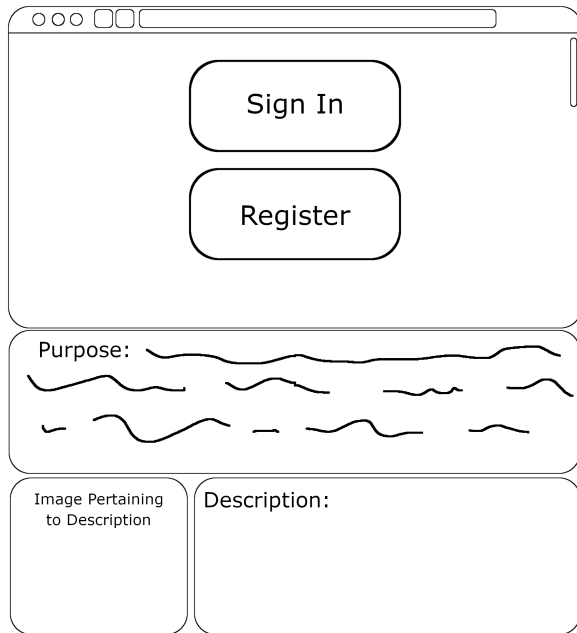
Personal users, for the most part have one or two credit/debit accounts, and usually only have to deal with their own expenses.

3.1.2 Business Users

By contrast, business users tend to have several credit/debit accounts, 3 or more, and are likely to want to make use of the more complex features, such as account aggregation.

3.2 Design Prototype:

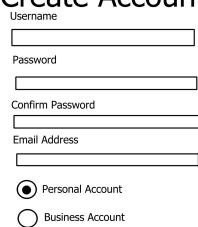
3.2.1 First Time Setup



A wireframe of a web form titled "First Time Setup". At the top, there are two rounded rectangular buttons labeled "Sign In" and "Register". Below these buttons is a section labeled "Purpose:" followed by three horizontal wavy lines representing text input. At the bottom, there are two side-by-side rounded rectangular boxes. The left box is labeled "Image Pertaining to Description" and the right box is labeled "Description:".

This is the page users will land on when they search for our site. If you already have an account you simply need to sign in, if you don't you need to register.

Create Account



A wireframe of a "Create Account" form. It consists of four stacked text input fields labeled "Username", "Password", "Confirm Password", and "Email Address". Below the "Email Address" field are two radio button options: "Personal Account" (which is selected) and "Business Account".



A large, rounded rectangular button labeled "Confirm".

New users add their email address to create an account, choose whether it is a personal or business

account. This changes the default budgets and tags when the account is first created.

Add Financial Accounts

Add new debit account

New Debit Account

Nickname

Bank

Account type

Account Number

Balance

Add new credit account

Finish

The final step of account creation is adding the users financial accounts.

3.2.2 Budget View

Budgets

Add

▼ Entertainment

Transaction1

Transaction2

Transaction3

Games

Total: NaN

Price: NaN

Price: NaN

Price: NaN

Amenities

Edit

Transactions

Add

Transaction1

Price: NaN

*

*

*

Budgets

Add

▼ Labor

Sales

Transaction1

Transaction2

Transaction3

Accounting

Total: NaN

Price: NaN

Price: NaN

Price: NaN

Utilities

Edit

Transactions

Add

Transaction1

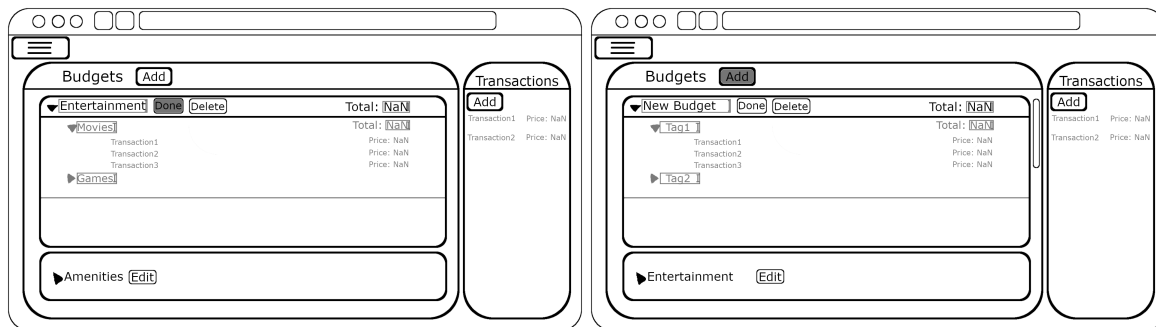
Price: NaN

*

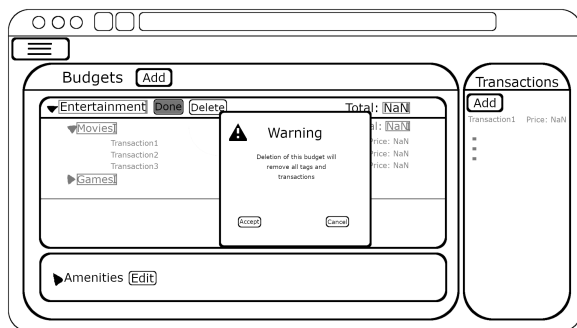
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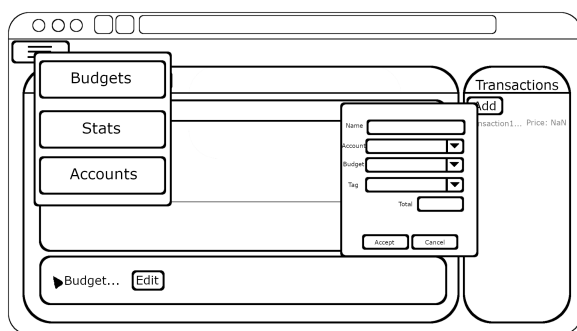
This is the page users will land on when they get done with registering or when they sign in. On the left is the personal version and on the right is the business version. The main difference between the two are the default tags. Here they can add and edit their budgets and add transactions.



When the edit button (next to a budget) is pushed, the fields for the name of the budget, the tags, and the totals become editable. When the add button is pushed a new budget is added to the top of the budget view and the fields are editable by default. When the done button is pushed the fields become finalized.



When the delete button is pushed a warning will be shown to the user. If the user accepts then the budget, along with its tags, are deleted. Transactions are moved to a budget called "other".



This shows the various popups that the page will have. Pushing the add transaction button will prompt the user to add in a transaction. Pushing the menu in the top left will show the user different pages they can go to.

3.2.3 Account View



Your Accounts

Debit

Wells Fargo Checking Account XXXX-XXXX-XXXX-1234 - \$123.45
Wells Fargo Savings Account XXXX-XXXX-XXXX-9876 - \$543.21

Add new debit account

Credit

American Express XXXX-XXXX-XXXX-4321 - \$1234.56
Master Card XXXX-XXXX-XXXX-6789 - \$987.65

Add new credit account

Edit Accounts

Delete Accounts

The users can view their accounts in aggregate and also add new accounts if they are created.

Edit Your Accounts

Debit

Wells Fargo Checking Account XXXX-XXXX-XXXX-1234 - \$123.45



New Debit Account

Nickname

Bank

Account type

Account Number

Balance

Wells Fargo Savings Account XXXX-XXXX-XXXX-9876 - \$543.21



Credit

American Express XXXX-XXXX-XXXX-4321 - \$1234.56



Master Card XXXX-XXXX-XXXX-6789 - \$987.65



Save Changes

Cancel

Delete Accounts

Debit

Wells Fargo Checking Account XXXX-XXXX-XXXX-1234 - \$123.45



Are you sure you want to delete Wells Fargo Checking Account XXXX-XXXX-XXXX-1234 ?

Confirm

Cancel

Wells Fargo Savings Account XXXX-XXXX-XXXX-9876 - \$543.21



Credit

American Express XXXX-XXXX-XXXX-4321 - \$1234.56



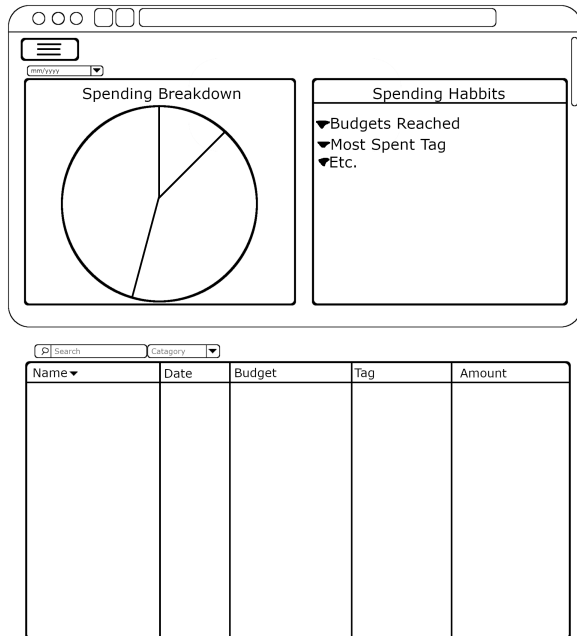
Master Card XXXX-XXXX-XXXX-6789 - \$987.65



Finish

From the "Your Accounts" page users can edit an existing account, or delete accounts because they have closed the account or were removed from it.

3.2.4 Stats View



This page shows a breakdown of how much the user has been spending and shows the spending habits of the user. Note the dropdown menu up top, this is used to select what time period you'd like to look at, 1 month, 3 months, a year, or all time. The table below shows all transactions, and is default sorted by the name of the transaction, but you can click on the headings to either sort by those headings, or click a heading twice to switch to reverse sorting by that heading.