

Budget Buddy

Final Project Submission
Computer Science 3307A
Michael Katchabaw
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Group 32

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Summary of User Story Progress

Story	Story Points	Status
User Story #1	3	Complete
User Story #2	4	Complete
User Story #3	3	Complete
User Story #4	4	Complete
User Story #5	4	Complete
User Story #6	4	Complete
User Story #7	6	Complete
User Story #8	7	Complete
User Story #9	7	Complete
User Story #10	7	Complete
Total	49	

Acceptance Tests

These are the acceptance tests that were used to test the functionality of our completed user stories.

User Story 1: Income Recording

In order to analyze my income and manage a budget as a user, I want to input my income

Test	Action	Expected Result
Test with a negative value (Pass)	<ol style="list-style-type: none">1. When prompted to "Enter the income amount" enter a negative value (e.g. -100)2. Click "Add Income" button3. Click the "Check Balance" button	Negative balance is displayed to user (e.g. \$-100.00)
Test with a 0 value (Pass)	<ol style="list-style-type: none">1. When prompted to "Enter the income amount" enter 1002. Click "Add Income" button3. Click the "Check Balance" button4. Enter 0 in the "Enter the income amount" field5. Click "Add Income" button6. Click the "Check Balance" button again	Balance should remain unchanged (i.e. \$100.00) when 0 is added
Test with positive value (Pass)	<ol style="list-style-type: none">1. When prompted to "Enter the income amount" enter 1002. Click "Add Income" button3. Click the "Check Balance" button	Balance of \$100.00 is displayed to the user
Test with multiple income entries (Pass)	<ol style="list-style-type: none">1. When prompted to "Enter the income amount" enter 2002. Click "Add Income" button3. Click the "Check Balance" button4. Enter 100 in the "Enter the income amount" field5. Click "Add Income" button6. Click the "Check Balance" button again	Balance of \$200.00 is updated to \$300.00

User Story 2: Category Creation

As a user who has expenses, I want to be able to select a category (Housing, Utilities, Transportation, Groceries, Savings, Investments, Entertainment, or Other) for each expense I enter.

Test	Action	Expected Result
Test with "Housing" category selected (Pass)	<ol style="list-style-type: none">1. Select "Housing" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Housing expense of \$10 is displayed
Test with "Utilities" category selected (Pass)	<ol style="list-style-type: none">1. Select "Utilities" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Utilities expense of \$10 is displayed
Test with "Transportation" category selected (Pass)	<ol style="list-style-type: none">1. Select "Transportation" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Transportation expense of \$10 is displayed
Test with "Groceries" category selected (Pass)	<ol style="list-style-type: none">1. Select "Groceries" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Groceries expense of \$10 is displayed
Test with "Savings" category selected (Pass)	<ol style="list-style-type: none">1. Select "Savings" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Savings expense of \$10 is displayed
Test with "Investments" category selected (Pass)	<ol style="list-style-type: none">1. Select "Investments" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Investments expense of \$10 is displayed
Test with "Entertainment" category selected (Pass)	<ol style="list-style-type: none">1. Select "Entertainment" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Entertainment expense of \$10 is displayed
Test with "Other" category selected (Pass)	<ol style="list-style-type: none">1. Select "Other" Category2. Enter expense amount (e.g. 10)3. Select a date (e.g. November 7, 2023)4. Click "Submit Expense" Button	Other expense of \$10 is displayed

User Story 3: Budget Setting

As a user, I want to allocate my budget across the different expense categories. I want to enter a value for each expense category. The sum of the budgets across all expense categories should equate to my total budget.

Test	Action	Expected Result
Test with budgets that sum to greater than the total budget (Fail)	<ol style="list-style-type: none">1. Login to Budget Buddy2. Enter a total budget in the “Enter the amount you want to budget” field (e.g. 1000)3. Allocate 900 to Housing, and 200 to Transportation.	“Budget is too high” error message is displayed to user
Test with budgets that sum to less than the total budget (Fail)	<ol style="list-style-type: none">1. Login to Budget Buddy2. Enter a total budget in the “Enter the amount you want to budget” field (e.g. 1000)3. Allocate 700 to Housing and 200 to Transportation.	“Budget is too low” error message is displayed to user
Test with budgets that sum to the exact total budget (Pass)	<ol style="list-style-type: none">1. Login to Budget Buddy2. Enter a total budget in the “Enter the amount you want to budget” field (e.g. 1000)3. Allocate 800 to Housing and 200 to Transportation.	“Budget has been set” message is displayed to user

User Story 4: Expense Recording

As a user, I want to be able to input each expense I incur and select the date, amount, and category (from a dropdown) into the program. As a user, I also want to be able to view a list of my expenses.

Test	Action	Expected Result
Test with all valid fields (Pass)	<ol style="list-style-type: none">1. Enter income amount (e.g. 5000)2. Select Category (e.g. “Housing”)3. Enter valid expense date (e.g. November 6, 2023)4. Enter expense amount lower than income balance (e.g. 1000)	Expense date, category, and amount is displayed to user in list
Test with future date (Fail)	<ol style="list-style-type: none">1. Enter income amount (e.g. 5000)2. Select Category (e.g. “Housing”)3. Enter expense date that is in the future (e.g. December 31, 2023)4. Enter expense amount lower than income balance (e.g. 1000)	Error message “Selected date cannot be in the future” is displayed to user and expense is not added to list
Test with invalid date (Fail)	<ol style="list-style-type: none">1. Enter income amount (e.g. 5000)2. Select Category (e.g. “Housing”)3. Enter invalid expense date(e.g.	Error message “Please choose a valid date” is displayed to user and expense is not added to list

	February 31, 2023) 4. Enter expense amount lower than income balance (e.g. 1000)	
Test with expense amount higher than income balance (Fail)	1. Enter income amount (e.g. 1000) 2. Select Category (e.g. "Housing") 3. Enter valid expense date (e.g. November 6, 2023) 4. Enter expense amount higher than income balance (e.g. 2000)	Error message "Expense amount cannot be greater than balance" is displayed to user and expense is not added to list
Test with empty expense amount field (Fail)	1. Enter income amount (e.g. 5000) 2. Select Category (e.g. "Housing") 3. Enter valid expense date (e.g. November 6, 2023) 4. Leave expense amount field empty	Error message "Please enter a valid expense amount" is displayed to user
Test with negative expense amount (Fail)	1. Enter income amount (e.g. 5000) 2. Select Category (e.g. "Housing") 3. Enter valid expense date (e.g. November 6, 2023) 4. Enter negative expense amount (e.g. -100)	Error message "Please enter a valid expense amount" is displayed to user
Test with expense amount of 0 (Fail)	1. Enter income amount (e.g. 5000) 2. Select Category (e.g. "Housing") 3. Enter valid expense date (e.g. November 6, 2023) 4. Enter expense amount of 0	Error message "Please enter a valid expense amount" is displayed to user

User Story 5: Expense Summary

As a user, I want to be able to request a summary of my total expenses over a selected time period. I want to be able to see my expenses broken down by category and be able to analyze what the majority of my spending is going towards

Test	Action	Expected Result
Test with no expenses (Pass)	1. Login to Budget Buddy 2. Do not enter any expenses 3. Click "Submit Dates"	Expense Summary is displayed with no information.
Test with valid start and end date (Pass)	1. Login to Budget Buddy 2. Under the Expenses section, select a category (e.g. Groceries), enter an expense date (e.g. November 1, 2023), and enter an expense amount (e.g. 100) and click "Submit Expense" 3. Select a start date and end date in which the expense date falls between.	Expense Summary is displayed with expenses between start date and end date

User Story 6: Currency Conversion

In order to have a consistent view of all my expenses in my preferred currency as a user, I want the ability to convert expenses I have in other currencies to CAD.

Test	Action	Expected Result
Test by entering an expense with a different currency (Pass)	<ol style="list-style-type: none">1. Enter an amount (e.g. 100)2. Enter a currency (e.g. USD)3. Click "Convert Currency" button	Amount is converted to USD and displayed to user in CAD (e.g. \$137.00)
Test by entering an expense with no specified currency (Fail)	<ol style="list-style-type: none">1. Enter an amount (e.g. 100)2. Leave the second currency field blank3. Click "Convert Currency" button	Error message "Invalid source currency. Please enter a valid currency" is displayed to user
Test by entering an expense in a unrecognized currency (Fail)	<ol style="list-style-type: none">1. Enter an amount (e.g. 100)2. Enter an invalid currency (e.g. USB)3. Click "Convert Currency" button	Error message "Invalid source currency. Please enter a valid currency" is displayed to user

User Story 7: User Authentication

To ensure that my financial data remains private and I can access my expenses through various devices. As a user, I want to create a personal account and securely log in whenever I use Budget Buddy.

Test	Action	Expected Result
Test with valid username and password (Pass)	<ol style="list-style-type: none">1. Enter valid username (john)2. Enter valid password (p1)3. Click "Login"	User is able to login and Budget Buddy homepage is displayed to user
Test with invalid username (Fail)	<ol style="list-style-type: none">1. Enter valid username (david)2. Enter valid password (p1)3. Click "Login"	User is unable to login and "Invalid credentials. Please try again" error message is displayed.
Test with invalid password (Fail)	<ol style="list-style-type: none">1. Enter valid username (john)2. Enter valid password (p2)3. Click "Login"	User is unable to login and "Invalid credentials. Please try again" error message is displayed.
Test creating new user (Pass)	<ol style="list-style-type: none">1. Enter new username (e.g. amanda)2. Enter new password (e.g. p3)3. Click "Create Account"4. Click "Login"	<p>"Account created successfully. You can now login" message is displayed to user.</p> <p>User is able to login and Budget Buddy homepage is displayed to user.</p>

User Story 8: Multiple Budget Profiles

As a user, I want the ability to create and manage multiple profiles within a single account to cater to distinct needs, such as a checking account, savings account, and investments account.

Test	Action	Expected Result
Test checking account (Pass)	<ol style="list-style-type: none">1. Login to Budget Buddy2. Under Income section, Select "Checking"3. Enter an income amount (e.g. 1000)4. Click "Add Income"	User's account balances are displayed, with \$1000 in the checking balance.
Test savings account (Pass)	<ol style="list-style-type: none">5. Login to Budget Buddy6. Under Income section, Select "Savings"7. Enter an income amount (e.g. 1000)8. Click "Add Income"	User's account balances are displayed, with \$1000 in the savings balance.
Test investments account (Pass)	<ol style="list-style-type: none">9. Login to Budget Buddy10. Under Income section, Select "Investments"11. Enter an income amount (e.g. 1000)12. Click "Add Income"	User's account balances are displayed, with \$1000 in the Investment balance.

User Story 9: Custom Personalized Categories

As a user, I want the ability to create custom expense categories in addition to the default categories to allow me to better organize and track expenses that are specific to my unique financial needs and priorities.

Test	Action	Expected Result
Test adding a custom expense category (Pass)	<ol style="list-style-type: none">1. Login to Budget Buddy2. Under the expense section, enter a custom category name (e.g. Travel)3. Click "Add Custom Category"	User should be able to select their custom category from the "Select Category" dropdown.
Test adding an expense under a custom category (Pass)	<ol style="list-style-type: none">4. Login to Budget Buddy5. Under the expense section, enter a custom category name (e.g. Travel)6. Click "Add Custom Category"7. Enter an expense date (e.g. November 1, 2023)8. Enter an expense amount (e.g. 1000)9. Click "Submit Expense"	Expense is displayed to user with the custom category (Travel)

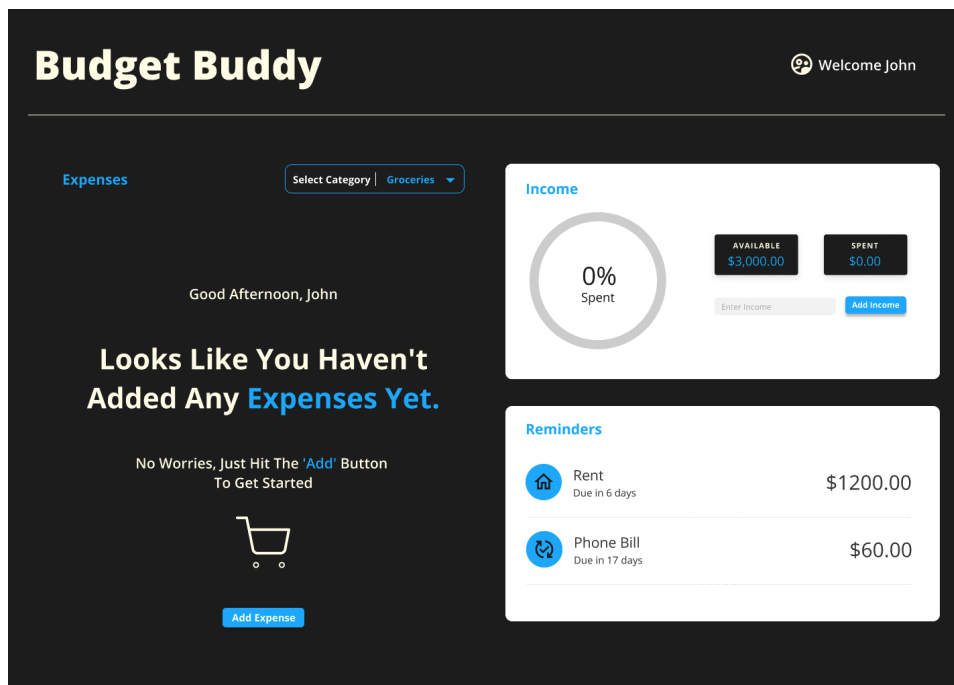
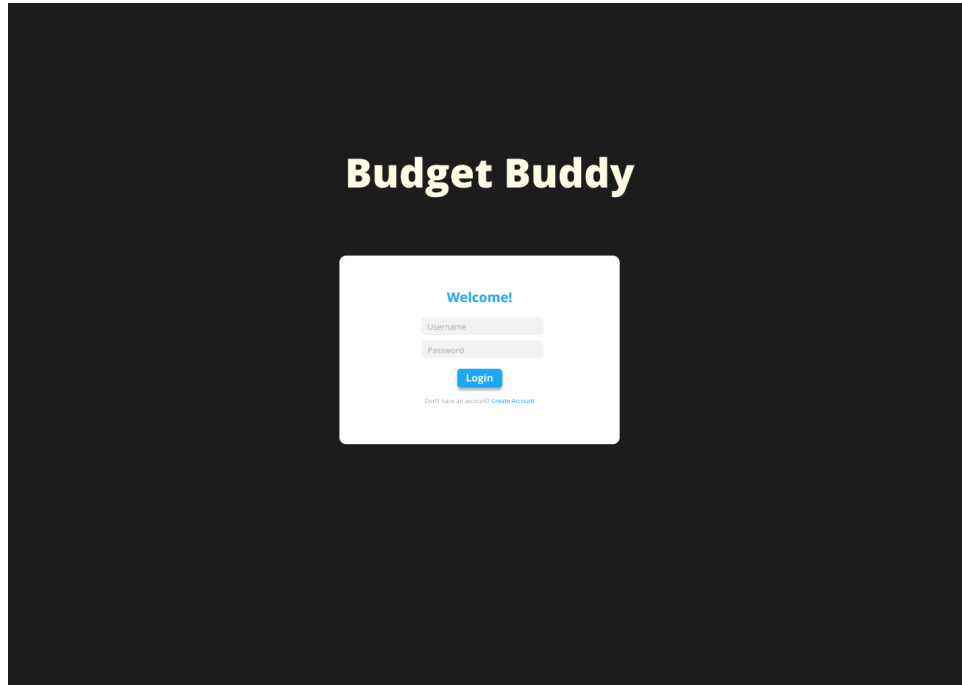
User Story 10: Expense Reminders

As a user, I want to be able to manually set reminders to help ensure timely payments.

Test	Action	Expected Result
Test with a valid future date (Pass)	<ol style="list-style-type: none">1. Enter a future reminder date (January 1, 2024)4. Enter a reminder title (e.g. Car Payment)5. Enter a reminder amount (e.g. 1000)	Reminder is displayed to user in table
Test with a past date (Fail)	<ol style="list-style-type: none">1. Enter a past reminder date (November 1, 2023)2. Enter a reminder title (e.g. Car Payment)3. Enter a reminder amount (e.g. 1000)	“Please choose a valid future date” error message is displayed to user
Test with no reminder title (Fail)	<ol style="list-style-type: none">1. Enter a future reminder date (January 1, 2024)2. Leave the “Enter Reminder Title” field empty3. Enter a reminder amount (e.g. 1000)	Reminder is not displayed to user
Test with no reminder amount (Fail)	<ol style="list-style-type: none">1. Enter a future reminder date (January 1, 2024)2. Enter a reminder title (e.g. Car Payment)3. Leave the “Enter Reminder Amount” field empty	“Please enter a valid reminder amount” error message is displayed to user

Figma Mockup

Given our limited knowledge of GUIs, our application is not currently very visually appealing or user friendly. To visualize what we hope our application to eventually look like, we created a prototype on Figma. The prototype can be accessed using [this link](#).



Budget Buddy

Welcome John

Expenses

Select Category | All



Credit Card Bill

November 1, 2023

\$900.00



Groceries

November 13, 2023

\$80.00



Vacation Savings

November 17, 2023

\$160.00



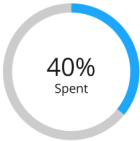
Utilities

November 21, 2023

\$60.00

Add Expense

Income



AVAILABLE

\$1,800.00

SPENT

\$1200.00

Enter Income

Add Income

Reminders



Rent

Due in 6 days

\$1200.00



Phone Bill

Due in 17 days

\$60.00

Final UML Class Diagram

