Date: 2025-01-09

COSC 4P02 Project Proposal - Minimalistic Accounting Web App

Team Members and Roles:

- Sangmitra Madhusudan
- Rouvin Rebello (Product Owner)
- Anthony Colosimo
- Tyler McDonald
- Jacob Drobena
- Skye Reid (Scrum Master)

Objectives:

Explanation of The Problem:

Small businesses, whether they are corporations, partnerships, or sole proprietorships, face many challenges when it comes to accounting/bookkeeping. The main problem being choosing which path to take when it comes to this task. Most businesses are given 3 options:

A) Hire an accountant or bookkeeper to do this for them, with the consequence being the thousands of dollars it may cost.
B) Learn the essential tools of Excel/Google sheets and manually create all of your accounting sheets, which requires both skill and increases the margin of error with non UI manual entry and custom formula creation.
C) Go through the long learning curves and high monthly costs of software like Salesforce and QuickBooks.

Due to the challenges associated with these options, we intend to build a minimalist web app that can serve as an all-in-one for small business owners to use for their books while also maintaining their tax compliance.

Importance:
Post the Covid-19 pandemic, we have witnessed a notable surge in small businesses. As they flourish, their unique needs demand our attention. Unlike their large and established counterparts, these small businesses typically comprise small teams with tight budgets. Recognizing these challenges, our software, focusing on accounting functionalities, is designed to support financial management of this demographic. This focus not only caters to existing small business but also to budding entrepreneurs by providing them with the essential tools they need for financial management. Our application enables effective expense tracking and budgeting, both essential in gauging a business's success and steering its progress.

Overall Description:
Small businesses often struggle with accounting and bookkeeping due to costly or inefficient options like hiring professionals, managing manual spreadsheets, or navigating complex software. The web app we intend to create provides a simple, cost-effective solution tailored to small business needs. It features expense tracking, income management with inventory

adjustments, sales tax tracking, and an inventory tracker. The app will generate essential financial reports, including income statements, expense reports, sales tax reports. By reducing costs, simplifying processes, and improving organization, this app will serve as an effective tool for small business owners.

Basic Features:

- Expense Management: Track and categorize expenses
- Income Management: Add, edit, and delete income sources such as product sales or services
    - Automatically adjust inventory for sales
    - Include sales tax collection in income calculations where applicable
- Inventory Tracking: Maintain a simple inventory tracker to add inventory and manage stock
- Sales tax management: Record sales tax collected and track taxes paid by or for the business
- Financial Reports: Generate key financial statements including:
    - Income statements (Income - Expenses)
    - Expense Reports
    - Sales Tax Reports

SE Processes:

We will take a Scrum approach (an agile development method) to plan and create our application. By doing this, we can plan increments of work in weekly scrum meetings to ensure we have a working application quickly. Through this process we will be able to specify new requirements throughout the development phase, allowing us to add new features while still having a working application by the deadline. Our weekly scrum meetings will enable each member of the group to discuss their progress and potential challenges, promoting communication and transparency throughout the process. We can then use this information to plan our next sprint and set new goals to keep the group on-track to produce the promised product.

Technical Stack:

Server-Side:

- TypeScript
- Express.js
- Prisma (w/ PostgreSQL, CockroachDB, etc.)
- Firebase (user authentication & cloud storage, API redundancy)
- Node.js (using npm packages such as PDFKit)

Front-End:

- React
- Tailwind CSS

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Testing Frameworks:
- Jest (ts-jest)
- Decorator frameworks such as Codecov

Task Management:
- Jira (user stories, backlog, high level proposals)
- Linear (for tracking the development life cycle, specifically)

GitHub Page:
https://github.com/tm21cy/4P02-Group-10

Meeting Schedule:
- The meeting will take place weekly during the class time scheduled for COSC 4P02 (10 AM - 12 PM on Tuesdays)

Timetable (Tentative):

Week of	Objective
January 5th	● Gather team members and decide roles ● Research project and feasibility ● Research and decide technical stack ● Use When2meet for meeting scheduling
January 12th	● Watch tutorials and research the tools so that each member is familiar with the technical stack ● Complete release planning documentation ● Design software requirements and product backlog ● Decide and implement tool to store user stories
January 19th	● Complete remaining design diagrams and expectations
January 26th	● Create backend and frontend development teams and begin development
February 16th	● Continue with development and minimal viable release before progress report deadline ● Review and test first release ● Submit and complete progress report ● Document implementation of SE Processes ○ Iterative

	○ Sprints ● Detail the system and provide screenshots ● Meet with and demonstrate release to TA
February 23rd	● Fix bugs and ensure most essential user stories are implemented
February 23rd	● Begin development of second release ● Add non-essential but other important features
March 16th	● Meet and demonstrate first release to TA ● Prepare and submit second progress report ● Document implementation of SE Processes ○ Iterative ○ Sprints ● Detail the system and provide screenshots ● Meet with and demonstrate release to TA
March 23rd	● Revise product ● Complete extensive system-level testing
March 30th	● Prepare extensive documentation ● Prepare presentation ● Prepare Demonstration
April 13th	● Decide presentation day ● Complete presentation