Simplified Management System for Microentrepreneurs (MEIs)

GitHub Repository: https://github.com/orgs/Inteli-College/teams/2025-1a-t02-g57

Sprint Structure

Sprint 1 (Weeks 1-2): Market Research and Competitive Analysis

Planned Objectives:

- Survey of existing tools and identification of strengths and weaknesses.

- Research with MEIs to map out their main business management challenges.

Activities Completed:

- Identification of the problem and justification

- Compilation of SEBRAE data, such as the study "Factors that contributed to business closures".

- Analysis of official statistics (e.g., 29% of MEIs close within 5 years) to support the project's relevance.

- Development of the Executive Summary and Business Goals

    - Drafted a document summarizing the initial value proposition, target audience, and strategic goals.

Defined Objectives:

- Simplify business management

- Reduce bureaucratic complexity

- Provide digital accessibility

Definition of Key Features:
Prioritized list of modules based on identified problems:

- Integrated financial management

- Real-time inventory management

- Automated receipt generation

Adjustments to Original Plan:
The original schedule allotted 3 weeks for market research, but Sprint 1 was condensed into 2 weeks, focusing only on theoretical foundation and initial documentation.

Generated Artifacts:

- **Problem and Justification Document:** Contextualization of MEIs' challenges using SEBRAE and IBGE data.

    - Link to references: Boletim Mapa de Empresas

- **Executive Summary and Business Objectives:** Initial version of the value proposition and project goals.

- **List of Prioritized Features:** Technical specification of modules to be developed.

Notes:

- **Documentation Focus:** This sprint prioritized conceptual groundwork, postponing market and competitor research to future sprints.

- **Transparency:** All artifacts are available in the repository, organized by sprint folders.

Sprint 2 (Weeks 3-4): Business Study

Planned Objectives:

- Initial definition of core platform features based on market research

- Structuring of platform modules and their interdependencies

- Identification of technologies and frameworks for development

- Definition of monetization model (subscription, freemium, etc.)

- Legal structure and business model definition

Activities Completed:

- Initial system architecture setup

- Justification of appropriate tools for the solution

- Database and information flow design

- Discussion on the most suitable database for the project's initial phase

- Documentation created using Docusaurus

Adjustments to Original Plan:
The original schedule allowed only 4 weeks of development, so a course correction and sprint reorganization was required.

Generated Artifacts:

- **System Architecture:**

  - Technologies used:

    - MySQL → Database

    - Electron → Backend

    - React → Interface

  - Advantages:

    - Scalability

    - Performance

    - Maintainability

- ■ Flexibility

- **Database Choice:**

  - ○ Options considered: PostgreSQL, MariaDB, SQL Server, SQLite

  - ○ Chosen: MySQL → Due to robustness, ease of implementation, and market acceptance

Notes:

- Artifacts were distributed weekly and completed by week 4. As a result, documentation was restructured and organized into new sprints: 3, 4, and 5.

- The artifact "Legal Structure and Business Model Definition" was split to cover only the **Business Model**, documented using the **Business Model Canvas** in Sprint 5.

Sprint 3 (Weeks 5-6): Prototype Development

Planned Objectives:

- Schedule review

- Interface prototype

- Creation of interface flows

Activities Completed:

- Reviewed the schedule and defined new sprints

- Interface prototype creation

- Persona development

- Design decisions to optimize navigation and highlight key features

- Creation of a user persona document for deeper user insight

- **System Flow Diagram:**

  - User stories elaborated

  - Document detailing key processes and user interactions with the system

Generated Artifacts:

- **Interface Flow Creation:**

  - User Stories:

    - Group Registration

    - Product Registration

    - Cash Register Opening

    - View Cash Report

    - View Product Report

  - Flow Diagram

- **User Roles:**

  - Administrator

  - Cashier

  - Manager

- **Processes Created:**

  - Group Registration

  - Product Registration

  - Cash Register Opening

  - Cash and Product Reports

- **Interface Prototype:**

- ○ Interface Structure:

    - ■ Sidebar

    - ■ Main Area

- ○ Color Palette

    - ■ Text

    - ■ Background

    - ■ Action Buttons

- ○ Usability Guidelines

Sprint 4 (Weeks 7-8): Strategic Planning

Planned Objectives:

- Solution Diagram

- Monetization Model

Activities Completed:

- **Solution Diagram:**

    - ○ Standardized naming conventions for system modules to reflect dependencies and integrations.

    - ○ Visually organized into groups: **Domains** and **Tools**.

- **Monetization Model:**

    - ○ Based on the solution diagram, tools were hierarchized as primary, secondary, and cross-linked.

    - ○ Enabled the creation of a **progressive pricing table**.

Generated Artifacts:

- **Solution Diagram:**

  - Diagram Legends

  - Domain Diagrams: POS, Finance, Clients

  - Internal dependency diagrams by domain

  - Inter-domain connection diagrams

- **Monetization Model Document:**

  - Definition of primary and secondary tools

  - Relationship between access and perceived value

  - Proposal for scalable plans (freemium, modular subscription)

  - Gradual feature release strategy

Sprint 5 (Weeks 9-10): Business Model Definition

Planned Objectives:

- Business Model

Activities Completed:

- **Cost Structure:**

  - Study of all expenses to understand the operational break-even point and scalability behavior

- **Business Model:**

  - Simplified presentation using the **Business Model Canvas** covering:

    - Customer segments

- - - ■ Value proposition

    - ■ Channels

    - ■ Customer relationships

    - ■ Key activities

    - ■ Key resources

    - ■ Key partners

    - ■ Cost structure

- **Market Research:**

    - ○ Analysis of the Brazilian microentrepreneur landscape to identify opportunities for a modular management system

    - ○ Mapping of the competitive ecosystem and discussion of potential differentiators

Generated Artifacts:

- **Cost Structure:**

    - ○ Overview of Monthly Costs

    - ○ Cost Classification:

        - ■ Direct Fixed Costs

        - ■ Indirect Fixed Costs

        - ■ Direct Variable Costs

    - ○ Break-even Point

    - ○ Economies of Scale

    - ○ Scalability Projection

- **Business Model (Business Model Canvas):**

- ○ Customer Segments

- ○ Value Proposition

- ○ Channels

- ○ Customer Relationship

- ○ Key Activities

- ○ Key Resources

- ○ Key Partnerships

- ○ Cost Structure

- **Market Research:**

  - ○ Methodology

  - ○ General Overview

  - ○ Validated Challenges

  - ○ Competitive Analysis

  - ○ Strategic Opportunity

  - ○ Discussion on Next Steps