Business Requirements Document

(Guide S50 Version 1.0)

for

Student Saver Student Expense Management System

<Version 1.0>

Prepared for

Frederick L. Revilleza Jr.

College of Computer Science

August 30,2024

Prepared by

Amarillo, Joseph Niño E.

Dedumo, Emmanuel A.

Vequiso, Ashley Josh V.

1 Contents

List of Tables

1. DOCUMENT REVISION LOG

Table 1 Document Revision Log

Date	Author	Version	Reason for Change
8/31/2024	Amarillo, Dedumo, Vequiso	1.0.0	Proposing a draft for the first version of Student Saver Student Expense Management System.
9/01/2024	Vequiso, Dedumo	1.0.5	Updated ERD to include new relationships between Student and Expense entities.

2. DOCUMENT REVIEWERS

Table 2 Document Reviewers

Name & Title	Role	Approval Date	Version

3. APPROVER & SIGNOFF

Table 3 Client Acceptor (Project Sponsor)

Name & Title	Role	Approval Date	Version
Signature:			

4. INTRODUCTION (Analysis Description)

4.1 DOCUMENT PURPOSE

This document outlines the analysis and design of the Student Saver Student Expense Management System. It serves as a comprehensive guide to the system's functionality, architecture, and user interface design. The primary purpose of this document is to provide detailed information on the system's requirements, design considerations, and implementation strategies to ensure a clear understanding of the project's objectives and deliverables. It is intended for use by the development team, stakeholders, and any other parties involved in the project, ensuring that everyone is aligned with the system's goals and expected outcomes.

4.2 DOCUMENT SCOPE

The scope of the **Student Saver Student Expense Management System** document encompasses all aspects of the system's development, including its design, implementation, and deployment. This document will cover the following key areas:

1. **System Overview**: A high-level description of the system, including its purpose, intended users, and key features.
2. **Requirements Analysis**: Detailed functional and non-functional requirements, including user stories, system behaviors, and constraints.
3. **System Architecture**: The design and structure of the system, including database schemas, data flow diagrams, and architectural models.
4. **User Interface Design**: Mockups and descriptions of the user interface, detailing how users will interact with the system.
5. **Implementation Plan**: The strategies and methodologies to be employed in the development of the system, including coding standards, technology stacks, and deployment procedures.
6. **Testing and Validation**: The testing strategies, plans, and criteria for ensuring the system meets all requirements and functions as intended.
7. **Maintenance and Support**: Guidelines and plans for system maintenance, updates, and user support after deployment.
8. **Project Timeline and Milestones**: A detailed timeline of the project's phases, including key deliverables and milestones.

This document is intended to provide a clear and comprehensive blueprint for the development and deployment of the Student Saver Student Expense Management System, ensuring that all stakeholders have a shared understanding of the project's scope and objectives.

4.3 DOCUMENT AUDIENCE

Table 4 Document Audience

Document Audience	Location
Software Developers	Software Developers are in charge of designing, building, and deploying the Student Saver system. They rely on this document to translate functional requirements into the actual code and to stay aligned with the project's objectives. Developers may be based in the IT department within the school or could be working from remote locations.
Project Managers	Responsible for overseeing the overall progress of the Student Saver project. They ensure that the project stays on schedule, within budget, and meets its objectives. They will use this document to understand the scope, requirements, and milestones of the project. Project Managers may be located in the school's central office or working remotely, depending on the school's structure.
End-Users	Include students, school staff, and possibly parents who will interact with the system on a daily basis. Their input is crucial for ensuring the system is user-friendly and meets their needs. They will use the system based on the specifications outlined in this document. End-users might be found in classrooms, administrative offices, or interacting with the system remotely from their home**s.**
UI/UX Designers	UI/UX Designers focus on creating an intuitive and user-friendly interface for the Student Saver system. They rely on the FRD to understand the user requirements and design guidelines that will ensure a positive user experience. Designers may work in collaboration with the development team on-site or remotely.
System Administrators	System Administrators are responsible for the ongoing maintenance and support of the Student Saver system after it goes live. They use the FRD to understand the system's requirements, architecture, and operational needs. System Administrators are typically part of the IT department and work on-site or remotely.
Stakeholders	Stakeholders include individuals and groups with a vested interest in the creation and success of the Student Saver system, such as school administrators, the finance department, and project sponsors. They use this document to monitor the project's progress and assess its impact. Stakeholders are typically located within the school, though some may be based off-site or operate remotely.

4.4 BUSINESS ANALYSIS APPROACH

The purpose of the Analysis phase in the Student Saver project was to identify and document the requirements related to student expense management, focusing on functionality, usability, and compliance with university policies. This phase aimed to provide detailed documentation necessary for guiding the development, testing, and implementation phases of the project. It involved reviewing existing information and defining new or adjusted requirements to ensure that Student Saver meets the needs of students, administrative staff, and the finance department.

The approach included:

- **Business Analysis Planning and Monitoring**: The analysis was managed to align with the project's objectives, ensuring that the process remained focused and relevant. Regular reviews and checks were conducted to confirm that the analysis aligned with the project's goals and requirements.
- **Elicitation**: Requirements were gathered through on-campus interviews with students, administrative personnel, and finance staff, as well as through surveys and focus groups. The goal was to capture user needs and preferences regarding expense management, ensuring that the system supports effective financial tracking and administrative functions.
- **Requirements Management and Communication**: Coordination was maintained to keep all stakeholders informed about progress. Any changes in requirements were documented thoroughly and communicated to all relevant parties to ensure ongoing clarity and alignment.
- **Requirements Analysis**: Collected requirements were analyzed to ensure they were complete, understood, and aligned with the objectives of the Student Saver system. This process involved verifying that the requirements were feasible and addressed both technical and user needs.
- **Solution Assessment and Validation**: Proposed solutions were assessed against the documented requirements to ensure they effectively addressed the business needs. This evaluation confirmed that the solutions were practical, viable, and consistent with the project's objectives.

The inputs to this phase included:

- **Business Case**: Provided a rationale for the project by outlining the needs, benefits, and objectives, ensuring that the requirements were aligned with the strategic goals for student expense management.
- **Master Project Plan**: Defined the project's timeline, deliverables, and key milestones, guiding the Analysis phase to ensure it stayed on schedule and aligned with overall project activities.

- **Project Charter**: Established the scope, goals, and stakeholders of the project, ensuring that the requirements were relevant and addressed the specific needs of the project.
- **Business Analysis Work Plan**: Detailed the approach, methods, and resources for conducting the business analysis, including timelines, responsibilities, and tools for effective requirements gathering.

5. System Architecture and Functional Overview

5.1 Platform Overview and System Components

The **Student Saver Student Expense Management System** is a web-based application designed to help students track and manage their expenses efficiently. The platform is accessible via standard web browsers and provides a user-friendly interface to facilitate easy interaction with the system. It is built using modern web technologies to ensure responsiveness, scalability, and security.

System Components:

1. **User Interface (UI)**: The front-end component provides the graphical interface through which users interact with the system. It includes dashboards, forms, and reports, designed using React and Material UI (MUI) for a responsive and intuitive experience.
2. **Backend Server**: The server-side component manages the business logic, user authentication, and data processing. It is built using Node.js or another suitable backend technology and handles requests from the front end, performs necessary operations, and communicates with the database.
3. **Database**: The database stores all user data, including expense records, budgets, and account information. It is designed to ensure data integrity and security, typically using a relational database system like MySQL or PostgreSQL.
4. **API Layer**: The API layer provides endpoints for the front end to interact with the backend server. It facilitates communication between different components of the system and supports operations such as retrieving, updating, and deleting data.
5. **Authentication and Authorization**: This component ensures that only authorized users can access certain features and data within the system. It includes mechanisms for user login, role-based access control, and session management.

6. **Reporting and Analytics**: This module generates various reports and analytics related to user expenses and budgets. It provides insights and visualizations to help users understand their financial status and make informed decisions.
7. **Notification System**: This component handles notifications and alerts, such as reminders for upcoming expenses or budget limits. It ensures users are kept informed about important events and actions related to their expenses.
8. **Admin Panel**: The admin panel allows system administrators to manage user accounts, oversee system performance, and perform administrative tasks. It provides tools for configuration, monitoring, and maintenance of the system.

5.2 Functions Requirements

Table 5. Function Overview

Function	Description
User Registration & Login	Allows users to create accounts and log in to the system.
Expense Tracking	Enables users to record and categorize their expenses.
Budget Management	Provides tools for setting and managing budgets.
Expense Reporting	Generates reports and summaries of expenses and budgets.
Notification Alerts	Sends reminders and alerts for upcoming expenses and budget limits.
Data Visualization	Displays expense data and budgets using charts and graphs.
Profile Management	Allows users to update their personal information and settings.
Admin Panel	Provides administrative tools for managing users and system settings.

5.3 Logical Data Model