# 

BAHRIA UNIVERSITY KARACHI CAMPUS

**Department of Software Engineering**

**COURSE: GSL 321**

**DATABASE MANAGEMENT SYSTEMS**

**PROJECT Proposal**

**CLASS: BSE – 4A (SPRING - 2024)**

Financial Management System

**Group Members**

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# **INTRODUCTION & BACKGROUND**

In today's world, managing money can be tricky with so many things to keep track of. That's why we're working on a Financial Management System (FMS) project. The FMS is like a digital helper that makes it easier for people and businesses to handle their money smartly. It does things like keeping tabs on where money is going, setting budgets, reaching savings goals, and showing how well everything is going financially. Our project idea came from seeing how complex money matters can be nowadays and the need for tools that anyone can use to manage money better.

# **PROBLEM STATEMENT**

In today's dynamic financial environment, individuals and organizations struggle to manage finances effectively due to complexity and lack of automation. Traditional methods fall short in organizing and tracking income, expenses, and investments, leading to a need for a user-friendly Financial Management System. This system should centralize data, offer real-time insights, and enable informed decision-making to improve financial health and achieve goals.

# **PROPOSED SOLUTION**

## **3.1. FEATURES OF THE PROJECT**

1. User Authentication
2. Income and Expense Tracking
3. Budget Management
4. Goal Setting and Tracking
5. Reminders and Notifications
6. Income Source Management
7. Expense Frequency Management
8. Recurring Expenses Management
9. Payment Method Management
10. Savings Goal Progress Tracking
11. Debt Management
12. Investment Management
13. Asset Management

## **3.2. METHODOLOGY**

The methodology for implementing the Financial Management System project in SQL Server Management Studio (SSMS) involves several key steps. First, we'll conduct a thorough analysis of the project requirements, identifying the functionalities needed for user authentication, transaction tracking, budget management, goal setting, and notification handling. Next, we'll design the database schema, creating tables to store user information, financial transactions, budget data, goals, notifications, and other relevant entities. We'll establish relationships between these tables using primary and foreign keys to ensure data integrity. Once the database schema is finalized, we'll proceed with creating the database in SSMS and populating it with sample data for testing purposes. Then, we'll develop SQL scripts to implement CRUD (Create, Read, Update, Delete) operations for managing user data, financial transactions, budgets, goals, and notifications. Throughout the development process, we'll adhere to best practices for SQL query optimization, error handling, and security to ensure the reliability and efficiency of the Financial Management System. Finally, we'll conduct thorough testing to validate the functionality and performance of the system, making any necessary adjustments or refinements before final deployment

## **3.3. TECHNOLOGIES TO BE USED**

* SQL
* SQL SERVER MANAGEMENT STUDIO
* C#
* VISUAL STUDIO

# **PROJECT SCOPE**

The scope of the Finance Management System project encompasses the development of a comprehensive software application aimed at assisting individuals and organizations in managing their finances effectively. The project will involve the creation of a relational database model with tables including User, Transaction, Category, Budget, Goal, Notification, Income Source, Expense Frequency, Recurring Expenses, Payment Method, Income Schedule, Savings Goal Progress, Debt, Investment, and Asset.

Tables:

1. User
2. Transaction
3. Category
4. Budget
5. Goal
6. Notification
7. Income Source
8. Expense Frequency
9. Recurring Expenses
10. Payment Method
11. Income Schedule
12. Savings Goal Progress
13. Debt
14. Investment
15. Asset

# **PROJECT ABSTRACT**

The Financial Management System is a comprehensive software solution designed to empower individuals and organizations with effective financial planning and management capabilities. This project aims to develop a user-friendly platform that enables users to track their income, expenses, budgets, savings goals, debts, investments, and assets in one centralized database. Through features such as transaction tracking, budget management, goal setting, and notification alerts, users can gain insights into their financial health, make informed decisions, and work towards achieving their financial objectives. With a focus on data integrity, security, and user experience, the Financial Management System aims to provide a reliable and efficient tool for managing personal and business finances.

# **REFERENCES**

<https://www.sap.com/mena/products/erp/s4hana/what-is-financial-management-system.html>

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