

1. OBJECTIVE OF THE PROJECT

This website is used to create a comprehensive online platform that empowers users to effortlessly monitor their spending habits, track expenses in real-time, analyze expenditure patterns, and gain valuable insights into their financial behaviors. The website aims to facilitate financial management, encourage responsible spending, and promote financial wellness through intuitive interfaces, personalized recommendations, and educational resources.

It helps to build a responsive and secure expense tracker website that allows users to easily input, categorize, and analyze their expenditures, fostering better financial decision-making and long-term financial stability and to provide users with customizable budgeting tools and alerts that help them stay within their financial goals, promoting accountability and proactive financial management. and continuously innovate and enhance the expense tracker website based on user feedback and evolving financial needs, ensuring it remains a valuable tool for individuals seeking to improve their financial health.

2. ABOUT THE ORGANIZATION

An Expense Tracker website is a comprehensive online platform designed to assist individuals in effectively managing their financial transactions, tracking expenses, and achieving financial goals. This provides a user-friendly interface and a range of features to streamline financial management processes. The platform serves as a centralized hub for managing all financial transactions, including income, expenses, and other monetary activities. It may integrate with banking systems for seamless data synchronization. The Expense Tracker website is a solution for anyone seeking to take control of their finances, offering a powerful set of tools to track, analyze, and plan their financial activities effectively. By integrating components into the Expense Tracker website, users can benefit from a holistic financial management platform that covers the entire spectrum of their financial activities. This approach not only helps users control and analyze their expenses but also empowers them to make informed financial decisions, plan for the future, and achieve their financial goals. Additionally, the system's user-friendly interface and automation features contribute to a seamless user experience.:

Users can input details of their daily expenses, such as the amount spent, date, and a brief description. Expenses can be categorized into different types (e.g., groceries, health, entertainment) for better organization and analysis. Users can set budget limits for various expense categories to track and control their spending. The website generates reports and provides analytical tools to help users understand their spending patterns, identify trends, and make informed financial decisions. Some platforms allow users to set and track financial goals, such as saving for a vacation or paying off a debt. To protect sensitive financial information, expense tracker websites implement security measures such as encryption and secure authentication. Users can access the expense tracker from various devices, including desktops, laptops, tablets, and smartphones.

Overall, an expense tracker website aims to provide a comprehensive solution for users to gain visibility into their spending habits, manage their budgets effectively, and work towards their financial goals. These platforms contribute to financial discipline, helping individuals and businesses make informed decisions and achieve better financial health.

3. SYSTEM STUDY

In the dynamic realm of personal finance management, the Expense Tracker Website aspires to redefine the experience of tracking and managing expenses. The system study is a pivotal phase dedicated to comprehending, optimizing, and enhancing the entire expense tracking process. This thorough analysis encompasses the existing methodologies and hurdles, all aimed at the fundamental objective of creating a platform that is intuitive, efficient, and accommodating to a wide range of users. By conducting a thorough system study, the Expense Tracker Website aims to create a platform that not only meets the basic needs of users but also anticipates and addresses their evolving requirements in the realm of personal finance management. The goal is to deliver a user-friendly, secure, and efficient tool that empowers individuals to take control of their financial well-being.

3.1.1 Existing System

The current landscape of personal expense tracking predominantly relies on conventional methods, with a mix of manual record-keeping and limited digital solutions. Individuals typically manage their expenses through physical receipts, spreadsheets, or basic accounting software. This conventional approach introduces several challenges, hindering the efficiency of expense management for users. Expense tracking is primarily manual, involving the recording of expenses through physical receipts or manual data entry into spreadsheets. This process is time-consuming and prone to errors, leading to challenges in maintaining accurate and up-to-date financial records. As the existing system lacks a dedicated digital platform, users face limitations in accessing their expense data on the go. The absence of mobile applications or online accessibility restricts the flexibility of users in managing their expenses from different devices. Expense categorization is often subjective and may lack uniformity. Without predefined categories or intelligent algorithms, users may struggle to consistently categorize expenses, leading to challenges in meaningful data analysis.

In summary, the current expense tracking system relies on manual processes with limited digital support. Challenges include inefficiencies in data entry, accessibility issues, subjective categorization, and minimal automation. The absence of robust reporting features and collaborative tools highlights the need for an enhanced and digitally-driven Expense Tracker Website.

3.1.2 Proposed System

The envisioned Expense Tracker Website is poised to revolutionize personal finance management by introducing a modern, user-centric platform that addresses the deficiencies of the current manual and offline-centric model. Rooted in the principles of accessibility, efficiency, and user empowerment, the proposed system aims to elevate the overall experience of expense tracking for individuals. A user-friendly website interface ensures seamless navigation and an intuitive user experience, making expense tracking accessible to users of varying levels of financial literacy. Users can set and track financial goals, offering a motivational and goal-oriented approach to personal finance management.

In essence, the proposed Expense Tracker Website endeavors to be a dynamic, user-centric, and efficient solution that transcends the limitations of traditional expense tracking methods. By embracing automation, intelligence, and a collaborative approach, it seeks to empower users in their journey toward financial wellness and informed decision-making .

3.1.3. Feasibility Study

The feasibility study will provide a comprehensive evaluation of technical, economic, and operational aspects. Based on the outcomes of these assessments, a decision will be made regarding the practicality and viability of implementing the Expense Tracker Website. The feasibility study for the Expense Tracker Website aims to provide a clear understanding of the project's viability, taking into account technical, economic, and operational considerations. The outcomes of this study will guide decision-making and ensure that the proposed system aligns with the organization's goals and requirements.

3.1.3.1 Technical Feasibility

The technical feasibility of the Expense Tracker Website is paramount to its successful implementation. It revolves around the system's capacity to meet the organization's technological prerequisites and deliver a seamless and efficient expense tracking experience. The Expense Tracker Website is designed to adapt to emerging technologies, ensuring its longevity and relevance. The technical feasibility study affirms that the Expense Tracker Website is equipped with the necessary technological infrastructure to deliver optimal performance, maintain security, and adapt to the evolving landscape of personal finance management. This assessment ensures that the proposed system aligns with the organization's technological requirements and can effectively meet the needs of its users.

3.1.3.2 Economic Feasibility:

The economic feasibility of the Expense Tracker Website is a critical aspect that evaluates the financial viability and sustainability of the project. This analysis involves a comprehensive examination of expenses, benefits, and the overall return on investment to ensure that the proposed system aligns with the organization's financial objectives. The economic feasibility study provides confidence in the financial sustainability of the Expense Tracker Website. By aligning development costs with anticipated benefits and ensuring a positive return on investment, the study establishes the economic viability of the project. This assessment guides decision-making, demonstrating that the proposed system is not only technically sound but also economically feasible for the organization in the long run.

3.1.3.3 Operational Feasibility

Operational feasibility assesses the practicality and efficiency of implementing the Expense Tracker Website within the organization. It focuses on user acceptance, potential resistance to change, and the system's seamless integration into daily operations. The operational feasibility study affirms that the Expense Tracker Website is not only technically robust but also operationally feasible. The system is designed to be practical, efficient, and well-integrated into daily financial activities. By addressing user acceptance, mitigating resistance to change, and ensuring a seamless user experience, the study contributes to the overall success of the Expense Tracker Website as a practical and efficient solution for users and the organization.

4. USER CHARACTERISTICS

The proposed Expense Tracker is designed to serve the customers better. This organized structure ensures smooth operations and great user experiences. The platform is designed to accommodate:

4.2.1 Administrator

4.2.2 user

4.2.1 Administrator

The admin is the system administrator responsible for overseeing and managing the overall functionality of the website. Admin manages all users with add, edit & view operations. Additionally, the administrator is responsible for managing user information.

4.2.2 User

User create and manage user profiles, including the upload of salary and other relevant information. Applicants utilize the platform to not only control and analyze their expenses but also empowers them to make informed financial decisions, plan for the future, and achieve their financial goals

5. SYSTEM SPECIFICATIONS

5.1 Hardware Specification

The selection of hardware is very important for the existence and proper working of any software. When selecting the hardware, the size and capacity requirements are also noted. Below are the hardware details required by the system.

Processor	AMD Ryzen 5 5600H with Radeon Graphics 3.30 GHz
RAM	8 GB
Storage	512 GB and above
Other	Keyboard and mouse

5.2 Software Specification

Operating System	Windows 7/8/8.1/9/10
Front End	Python
Back End	SQLite

5.3 About The Software Tools And Platform:

FRONT END SPECIFICATION: Python Django

Django is a powerful web framework for building web applications using Python. Django is a high-level, open-source web framework written in Python that encourages rapid development and clean, pragmatic design. It includes an ORM (Object-Relational Mapping) layer, a robust admin interface, URL routing, form handling, template engine, security features, and more.

Django integrate various frontend technologies such as HTML, CSS, JavaScript, Bootstrap to create a more interactive and visually appealing user interface. Django use its template language to integrate Python code within HTML templates.

BACKEND SPECIFICATION: SQLite

SQLite is a lightweight, self-contained, serverless, and transactional SQL database engine. It is widely used due to its simplicity, ease of use, and portability. SQLite is commonly used for embedded applications, mobile apps, small to medium-scale websites, development and testing environments, and scenarios where a lightweight, easy-to-use, and portable database solution is needed. The entire database is stored in a single file, making it easy to distribute, manage, and use. SQLite implements most of the SQL standard, providing support for commonly used SQL commands, including SELECT, INSERT, UPDATE, DELETE, JOIN, and more. However, it has some differences and limitations compared to larger database systems.

6. MODULES AND DESCRIPTION

This website contains seven modules. They are mentioned below:

- 1.Customer Registration
- 2.Type Management
 - 2.1Category Management
 - 2.2 Subcategory Management
- 3.Finance Management
 - 3.1Income Management
 - 3.2Expense Management
- 4.Target Management
- 5.Report Management
 - 5.1 Summary Management
 - 5.2 Data visualization Management
- 6.Budget Management
- 7.Complaint Management

1. Customer Registration

Customer can create account in this website. They can login using their username and password. They can edit profile and view it. Customer can input details of their daily expenses, such as the amount spent, date, and a brief description.

2.Type Management

This module consist of category and subcategory as submodules,where user can add ,edit and view .

2.1 Category Management

Category Management are of two types which are personal or household use. With this users can easily add, edit, and view their expenses to keep track of their financial activities.

2.2 Sub Category Management

This module manages details about main the different category of where the customer spend money ,whether it is health ,entertainment,fuel and groceries. User and admin can add, edit, and view the details about the different categories.

3.Finance Management

This module involves comprehensive tools and features designed to help users effectively manage their finances. Financial management capabilities to empower users in taking control of their money. From tracking daily expenditures to analyzing spending patterns and setting budgets, our platform provides a holistic solution for managing personal or household finances.

3.1 Income Management

This submodule is a crucial component of overall financial management, allowing users to effectively track and manage their sources of income. This helps users to maintain a clear understanding of their financial inflows. Users can effortlessly input and categorize various sources of income, including salaries, freelance earnings, investments, and more.

3.2 Expense Management

This submodule of financial management focuses on tracking, categorizing, and analyzing expenses incurred by users. Users can effortlessly record and categorize their expenses, whether it's daily purchases, bills, or one-time expenditures. With customizable expense categories and tagging options, users can organize their spending in a way that aligns with their financial goals and priorities.

4. Target Management

This module allows users to set specific financial goals or targets they aim to achieve within a defined period. With customizable targets, the user can tailor these goals to fit their individual financial circumstances. Admin sets goals, and thus it is given to the user.

5. Report Management

This module provides users with insightful analyses and summaries of their financial activities. Users can generate customizable reports that summarize their income, expenses, budgets, and savings over specific time periods. These reports may include visual graphs and detailed breakdowns of spending categories, allowing users to quickly identify trends and areas for improvement.

5.1Summary Management

This submodule provides users with detailed insights into their saving habits and progress towards financial goals in text format. Users can generate detailed reports that track their savings contributions, progress towards savings goals, and overall financial growth over time.

5.2 Data Visualization Management

This submodule provides users with detailed insights into their saving habits and progress towards financial goals in graph format. Users can generate detailed reports that track their savings contributions, progress towards savings goals, and overall financial growth over time

6.Budget Management

This module allows user to set, track and manage their financial goals within a specified categories .admin give a feasible budget for user according to his expenditure.

7.Complaint Management

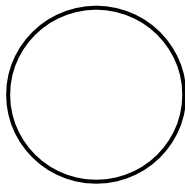
This module involves providing users with a platform to voice their concerns, issues, or suggestions regarding the service. Users can easily submit complaints, report bugs, or share suggestions through a dedicated channel or form on our platform.user can add and view and admin can only view.

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DATA FLOW DIAGRAM(DFD)

A data flow diagram (DFD) is a graphical tool used to illustrate and analyze the movement of data within a system. It serves as a fundamental tool from which other components of the system are developed. DFDs describe the logical flow of data between various elements in a system, such as people, departments, and workstations, independently of the physical components. These diagrams, often referred to as "bubble charts," are crucial for understanding system requirements and identifying key data transformations that will be translated into programs during system design. DFDs consist of interconnected bubbles representing processes, data sources or destinations, data stores, and information or data lines.

In the DFD, there are four symbols



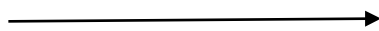
Process that transforms data flow



Source or Destination of data



Data Store



Information or Dataline

Rules for drawing data flow diagrams

Rule 1: Establish the context of the data flow diagram by identifying all of the net input and output data flows.

Rule 2: Select a starting point for drawing the DFD.

Rule 3: Give meaningful labels to all data flow lines.

Rule 4: Label all processes with action verbs that relate input and output data flows.

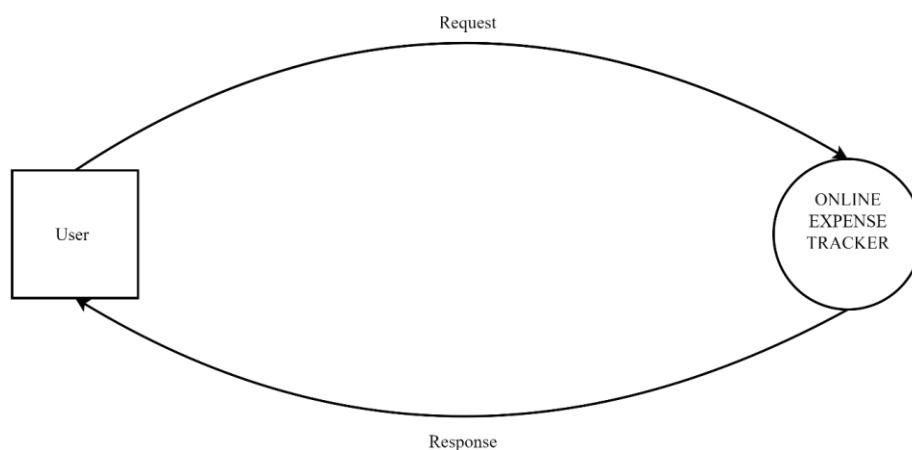
Rule 5: Omit insignificant functions routinely handled in the programming process.

Rule 6: Do not include control or flow of control information.

Rule 7: Do not try to put too much information in one DFD.

Rule 8: Be prepared to start over

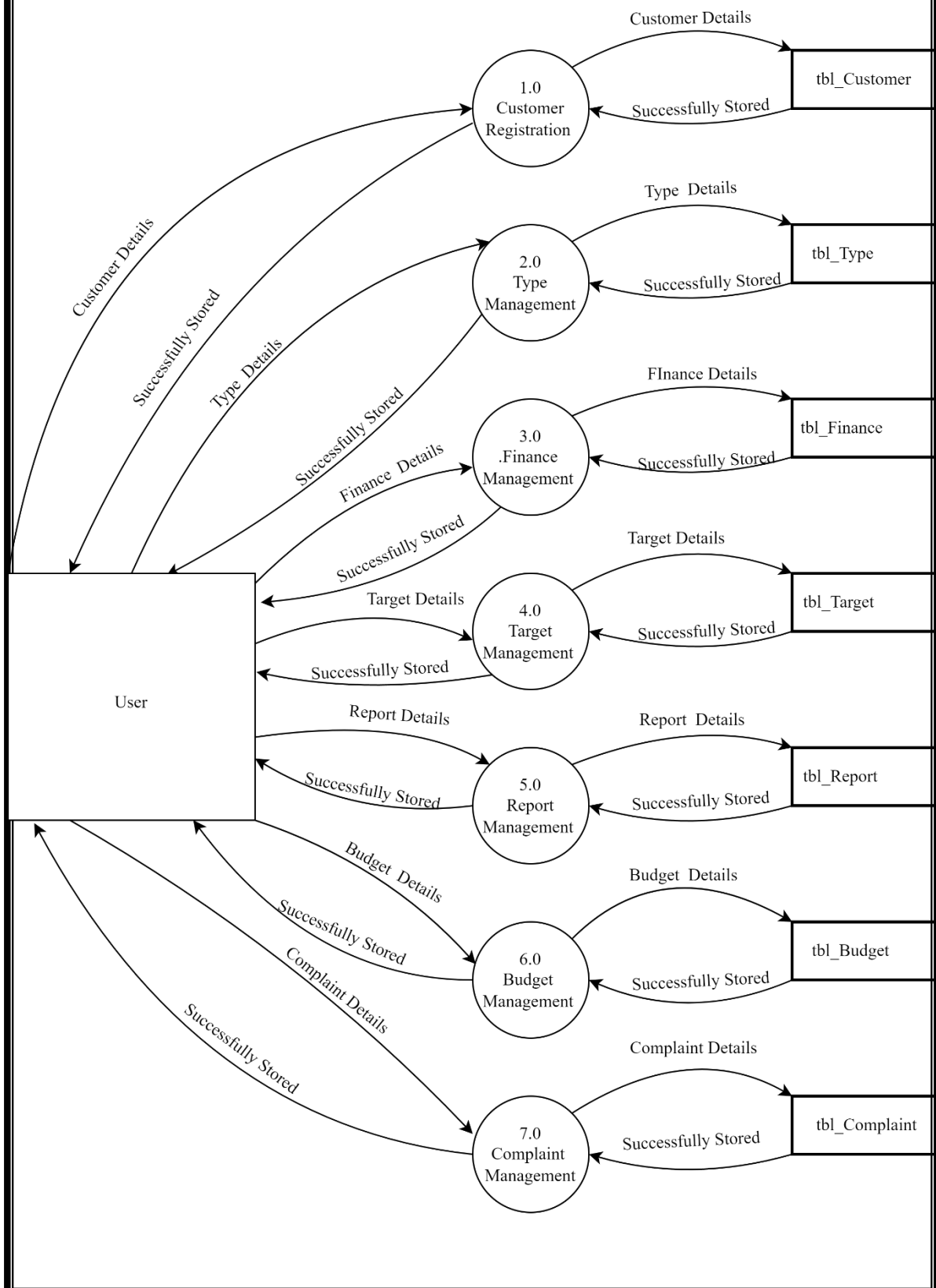
Level 0 DFD Showing Expense Tracker



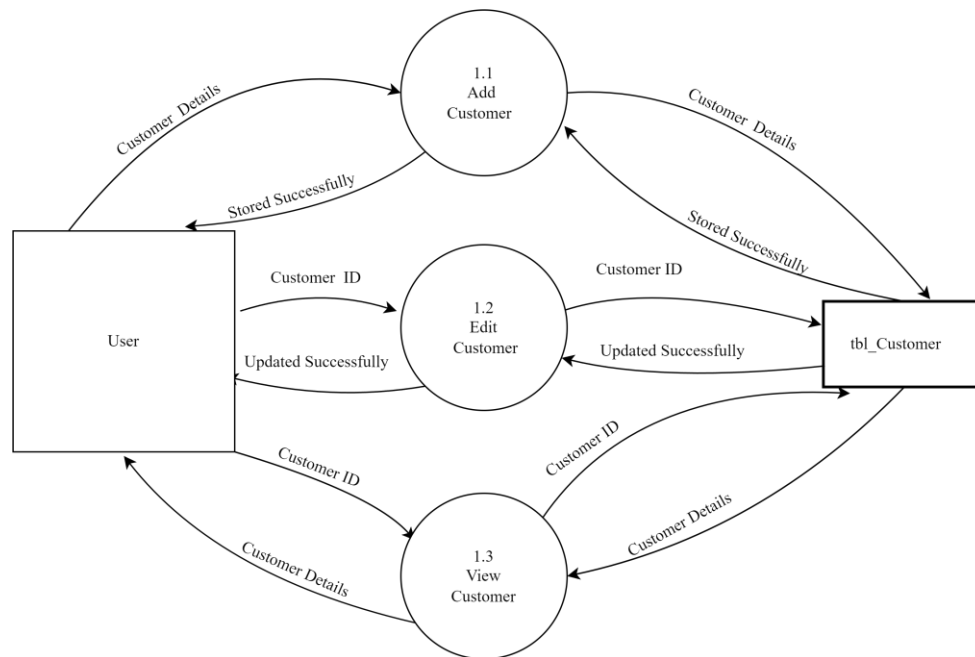
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Level 1 DFD Expense Tracker

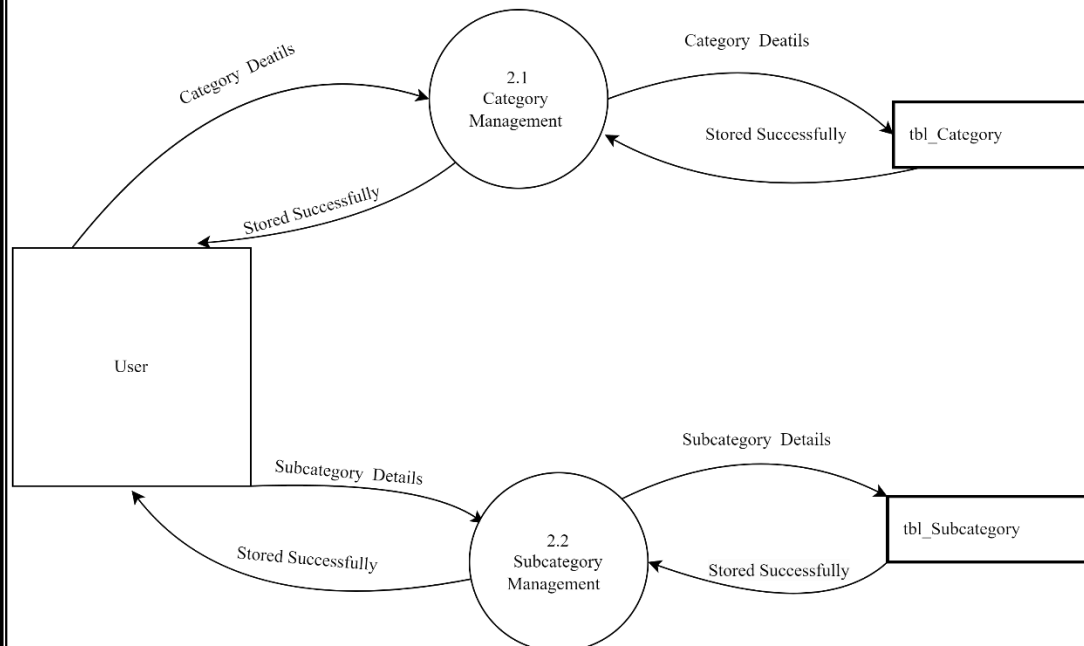
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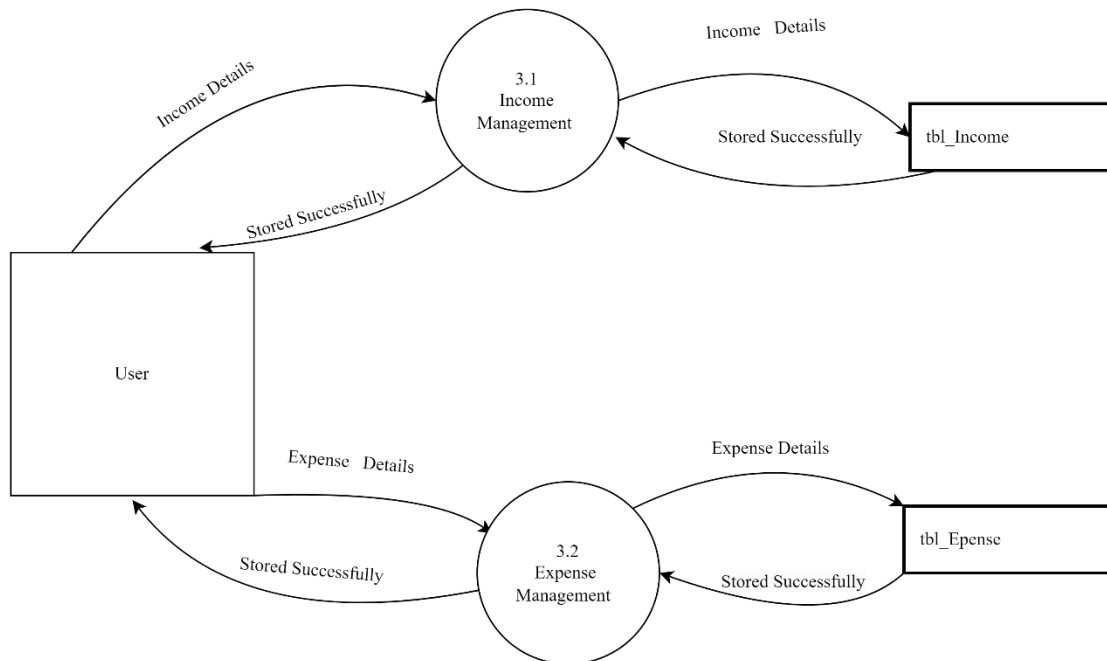
Level 2 DFD Showing Customer Registration



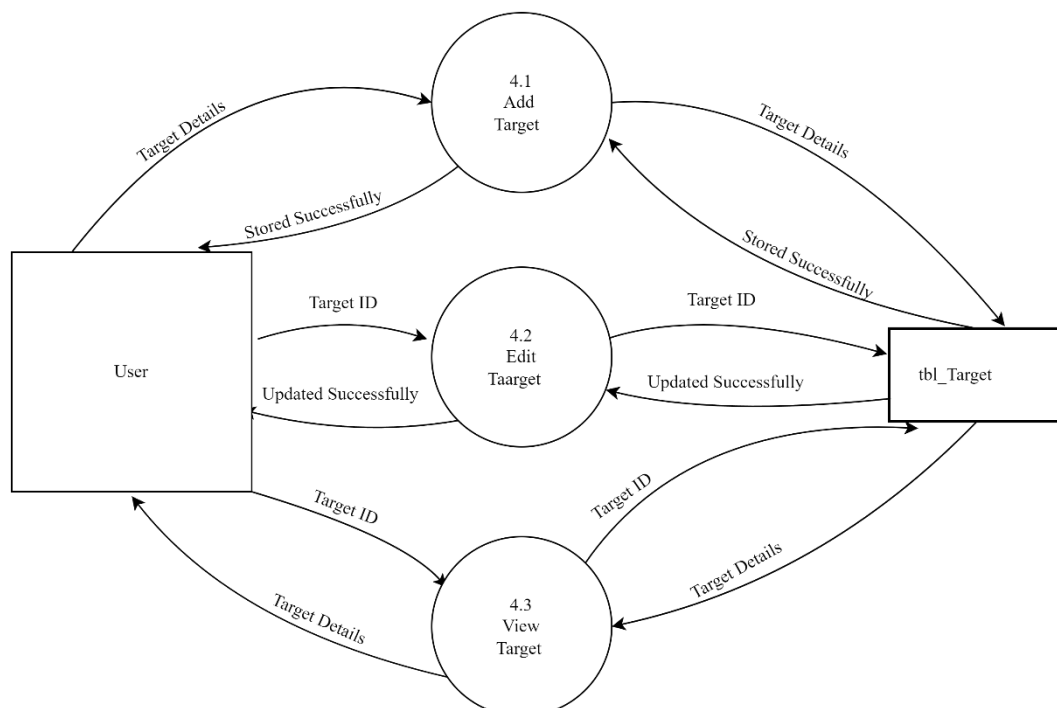
Level 2 DFD Showing Type Management



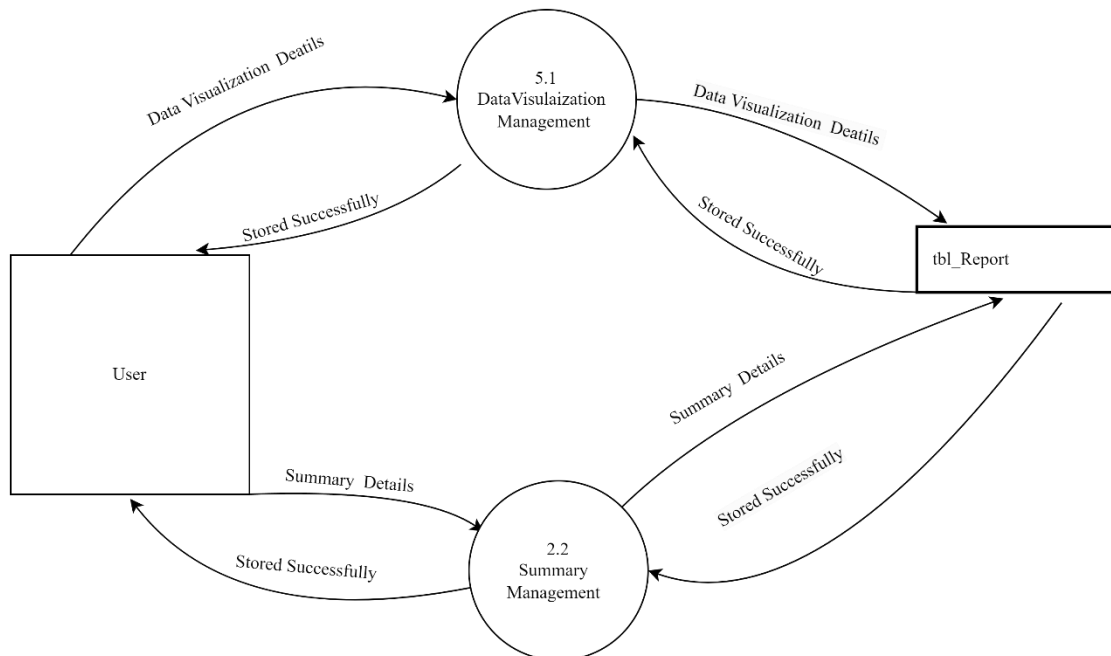
Level 2 DFD Showing Finance Management



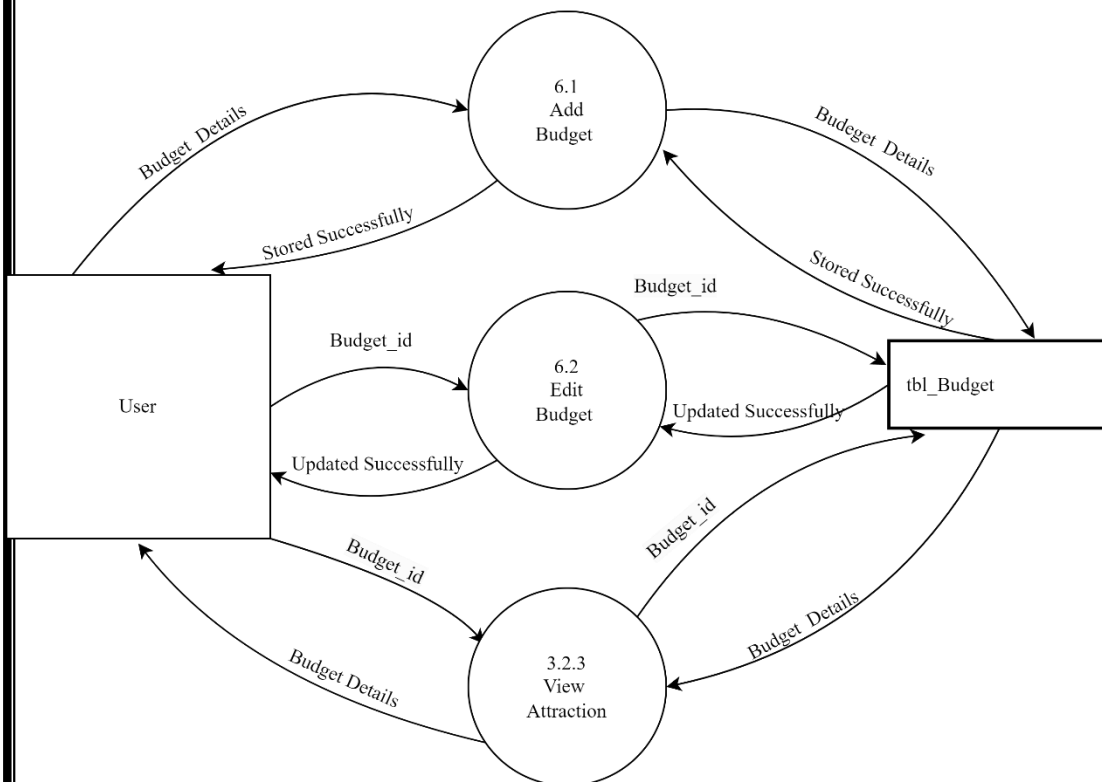
Level 2 DFD Showing Target Management



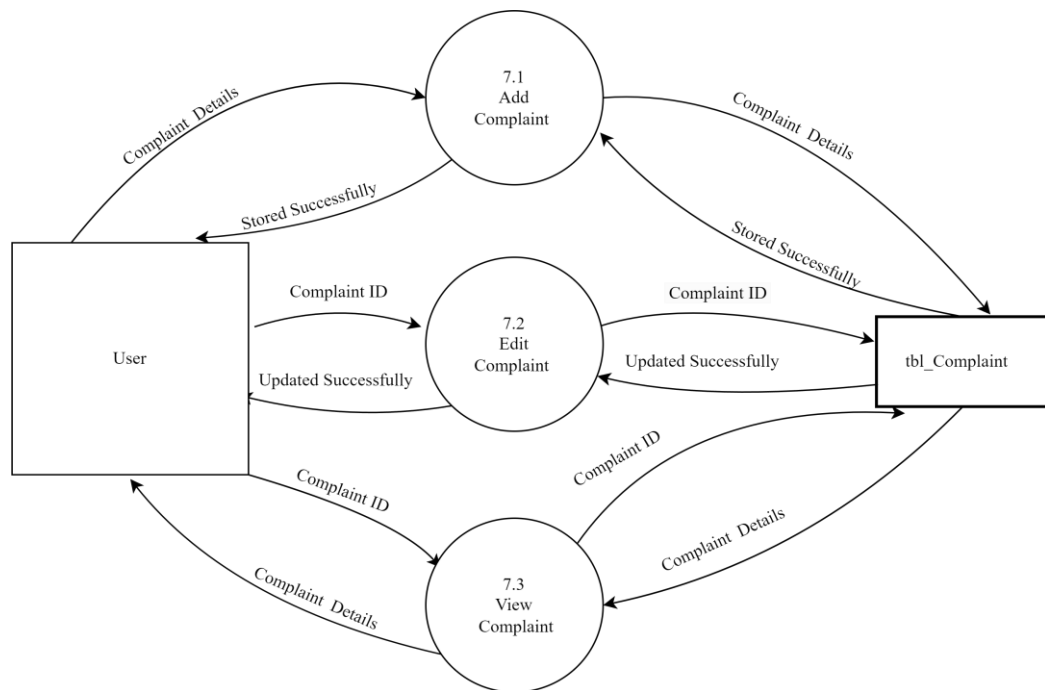
Level 2 DFD Showing Report Management



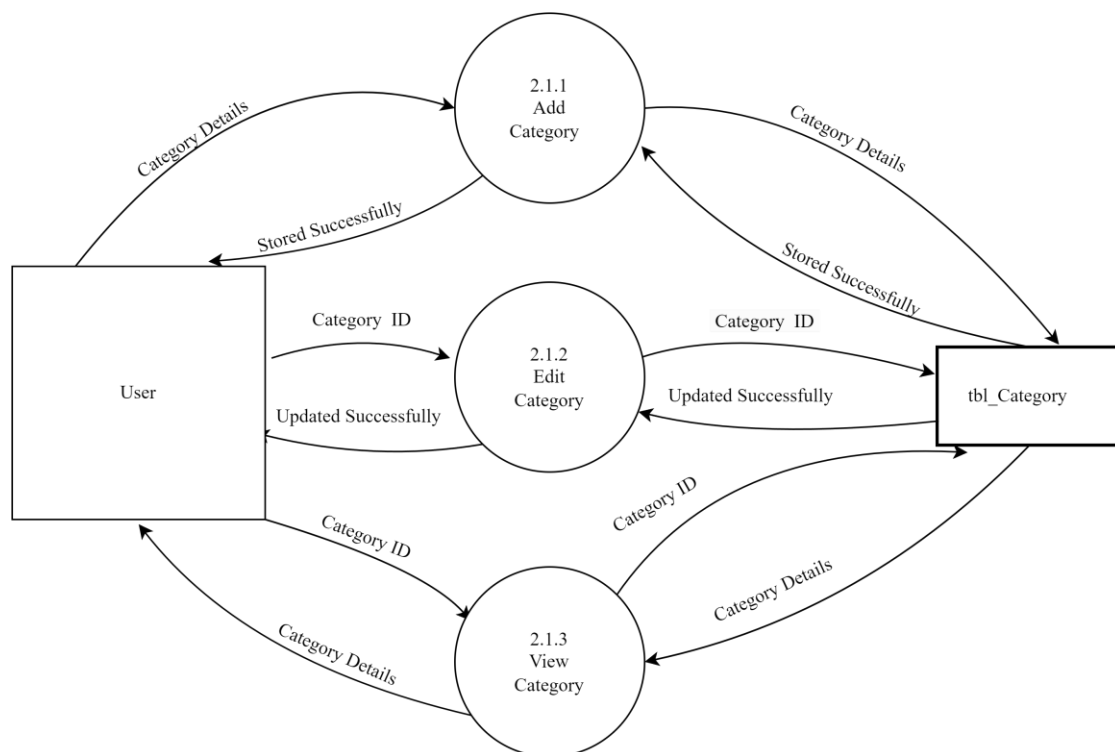
Level 2 DFD Showing Budget Management



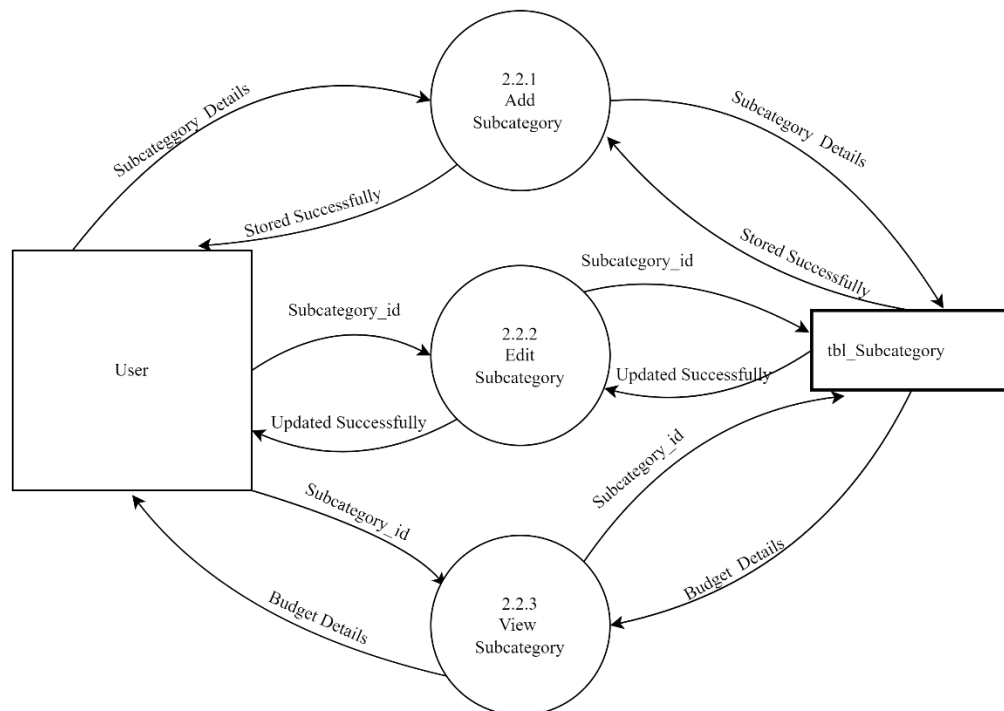
Level 2 DFD Showing Complaint Management



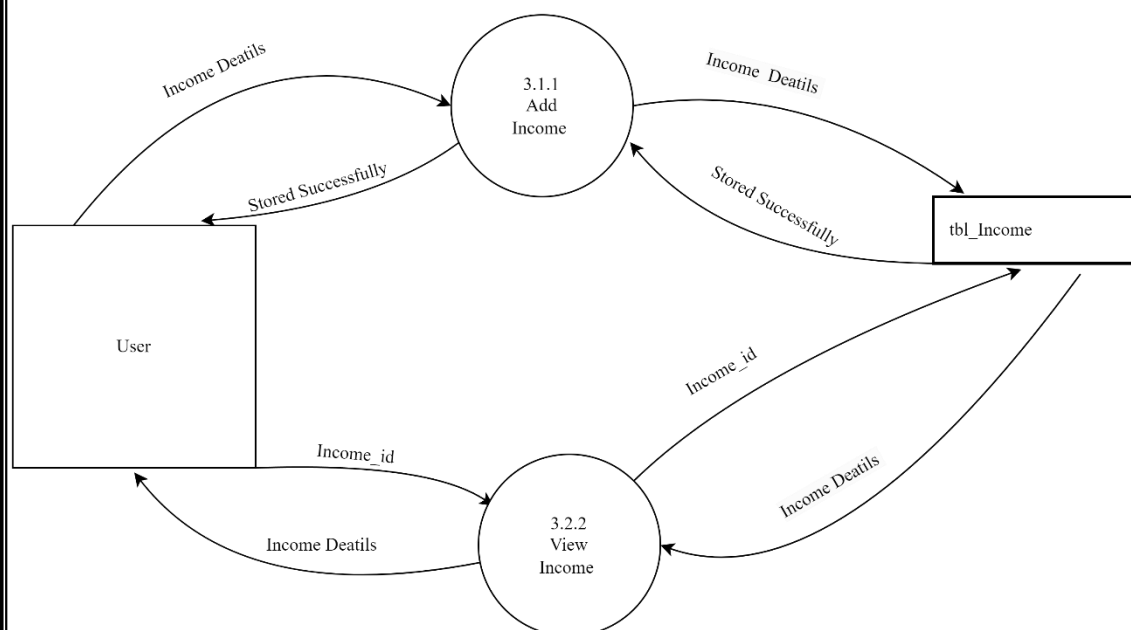
Level 3 DFD Showing Category Management



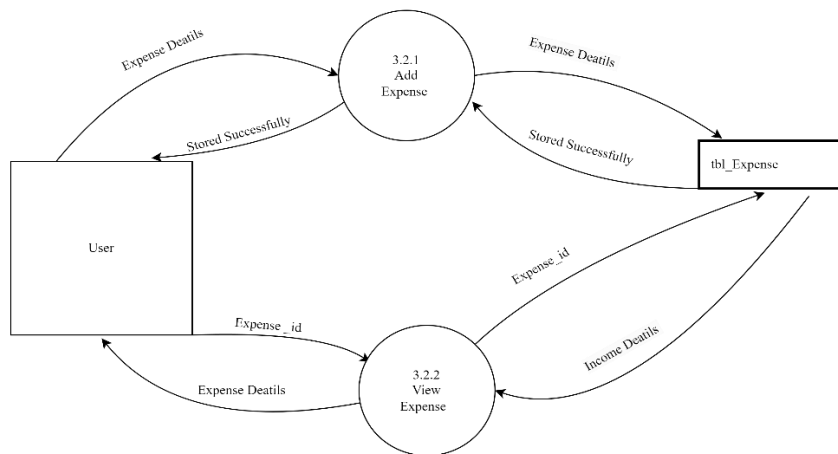
Level 3 DFD Showing Subcategory Management



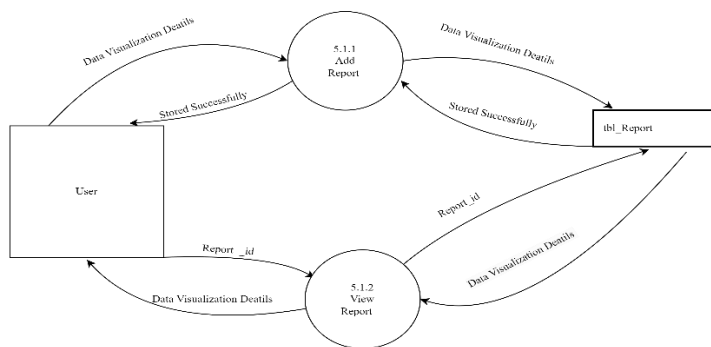
Level 3 DFD Showing Income Management



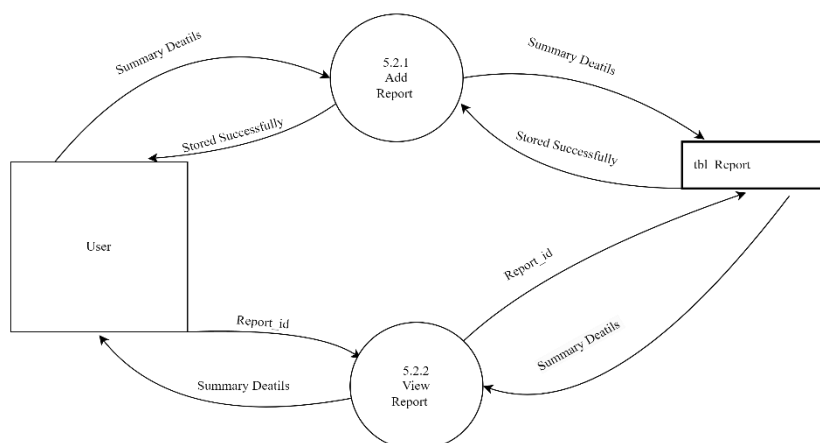
Level 3 DFD Showing Expense Management



Level 3 DFD Showing Data Visualization Management



Level 3 DFD showing Summary Management



DATABASE DESIGN

Normalization

Designing a database is a complex task and the normalization theory is a useful aid in this design process. The process of normalization is concerned with transformation of conceptual schema into computer representation form. A bad database design may lead to certain undesirable situations such as

- Repetition of information
- Inability to represent certain information
- Loss of information

To minimize these anomalies, normalization may be used. If the database is in a normalized form, the data can be restructured and can maintain it easily. This is important that the databases using that we are using may free from data redundancy and inconsistency. For this need we maintain the tables in a normalized manner.

First Normal Form

A relation is in first Normal Form (1NF), if and only if all its attributes are based on single domain. The objective of normalizing a table is in to remove its repeating groups and ensure that all entries of the resulting table have at most single value.

Second Normal Form

A table is said to be in second Normal Form (2NF), when it is in 1 NF and every attribute in the record is functionally dependent upon the whole key, and not just a part of the key.

Third Normal Form

A table is in third normal form (3NF) when it is in second normal form, and every non-key attribute is functionally dependent on just the primary key.

TABLE DESIGN**1. Table Name:** tbl_Users**Table Description:** Login details of the Users

FIELD	DATA TYPE	CONSTRAINTS	DESCRIPTION
Username	Varchar (20)	Primary Key	Username
Password	Varchar (255)	Not Null	Password
User_type	Varchar (8)	Not Null	Type of user
Status	Varchar (8)	Not Null	Active/Inactive

2. Table Name: tbl_Customer**Table Description:** Details of the Customer

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Cust_ID	Int (10)	Primary Key	Customer ID
Username	Varchar (20)	Foreign Key	Customer Username
Cust_pswd	Varchar (8)	Not null	Customer Password
Cust_fname	Varchar (10)	Not null	Customer First Name
Cust_lname	Varchar (10)	Not null	Customer Last Name
Cust_DOB	Date	Not null	Date of Birth
Cust_gender	Varchar (1)	Not null	Customer Gender
Cust_street	Varchar (10)	Not null	Street name
Cust_city	Varchar (10)	Not null	Customer City
Cust_dist	Varchar (10)	Not null	Customer District
Cust_PIN	Int (6)	Not null	Customer PIN Code
Cust_state	Varchar (20)	Not null	Customer State
Cust_phone	Varchar (10)	Not null	Customer Phone number
Cust_email	Varchar (20)	Not null	Customer Email
Cust_status	Varchar (8)	Not null	Active/Inactive

3. Table Name: tbl_Type**Table Description:** Type Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Type_ID	Int(10)	Primary key	Type_ID
Type_name	Varchar (20)	Not null	Expense type

4. Table Name: tbl_Budget**Table Description:** Budget Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Budget_ID	Varchar (10)	Primary Key	Budget ID
User_ID	Varchar (15)	Foreign key	User ID
Budget_amount	Varchar (30)	Not Null	Budget amount
Date	Date	Not Null	Date

5. Table Name: tbl_Target**Table Description:** Target Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Target_ID	Int(10)	Primary Key	Target ID
Cust_ID	Int(10)	Foreign key	Customer ID
Amount	Decimal(10,1)	Not Null	Target amount
Target_Date	Date	Not Null	Date by which target should be achieved

6. Table Name: tbl_Finance**Table Description:** Financial Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Cust_ID	Varchar(10)	Primary Key	Category ID
Type_ID	Int(10)	Foreign key	Type ID
Amount	Decimal (10,2)	Not null	Amount details

7. Table Name: tbl_Income**Table Description:** Income Details

DATA TYPE	FIELD	CONSTRAINT	DESCRIPTION
Income ID	Varchar (10)	Primary Key	Income ID
Income	Int	Not Null	Income
Date	Date	Not Null	Date

8. Table Name: tbl_Expense**Table Description:** Expense Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Expense_ID	Varhar(20)	Primary Key	Expense ID
Category_ID	Varchar (10)	Foreign Key	Category ID
Amount	Varchar (30)	Not Null	Amount
Date	Date	Not Null	Date

9. Table Name: tbl_Category**Table Description:** Category Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Category_ID	Varchar(10)	Primary Key	Category ID
User ID	Varchar (15)	Foreign key	User ID
Category_name	Varchar(10)	Not null	Package Total Price

10. Table Name: tbl_Report**Table Description:** Report Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Report_ID	Int(5)	Primary key	Report ID
Cust_ID	Int(5)	Foreign key	Customer ID
Report date	Date	Not null	Report generation date
Content	Varachar(20)	Not null	Details of report

11. Table Name: tbl_Savings**Table Description:** Savings Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Savings_ID	Int(5)	Primary Key	Savings ID
Cust_ID	Int (5)	Foreign key	Customer ID
Target_amount	decimal(10,2)	Not null	Amount set by user
Current amount	Decimal (10,2)	Not null	Current amount saved
Progress percentage	Daecimal(5,2)	Not null	Progress percentage towards the target

12. **Table Name:** tbl_Complaint

Table Description: Complaint Details

FIELD	DATA TYPE	CONSTRAINT	DESCRIPTION
Complaint_ID	Varchar(10)	Primary Key	Complaint ID
User ID	Varchar (15)	Foreign key	User ID
Complaint_desc	Varchar(30)	Not null	Complaint description
Reply	Varchar(30)	Not null	Reply
Date	Date	Not null	Date

ER ENTITY DIAGRAM