B&E TRACKER

-AN EXPENSE TRACKER

TEAM MEMBERS:
BALASIVAM(917721S003)
KEERTHANA (917721S017)
KRISHNA RAJA(917721S019)
VINOTHA(917721S039)

ABSTRACT

Expense Tracker is a web-based application designed to help users manage their personal finances by tracking income and expenses. This application is built using HTML, CSS, JavaScript, and PHP to provide a user-friendly and efficient platform for users to record, categorize, and analyse their financial transactions. This software is an essential in today's hectic world since it provides a convenient way to keep track of income and expenses, make budgets, and learn more about one's financial situation.

“B&E TRACKER” has a user-friendly interface with key features that make money management easier. Users are easily able to record their financial transactions, classify them, and examine their spending habits. To narrow down transaction searches based on categories, dates, and custom tags, the application provides a variety of filtering options.

Personalization is the base of “B&E TRACKER." The application allows users to set up individual accounts, giving them the ability to safely save their financial information, set financial objectives, and monitor their development over time. The extensive reporting and visualization options of "B&E TRACKER" are one of its most notable features.

This application is built using HTML, CSS, JavaScript, and PHP, offering cross-device compatibility, making it accessible on various platforms. This abstract provides an overview of the core functionalities of the "Expense Manager" web application, emphasizing its role as an indispensable tool for effective financial management.

2. INTRODUCTION:

2.1 Project Overview:

The B&E Tracker is a feature-rich web application designed to help individuals take control of their finances by providing a comprehensive platform for managing income, expenses, and budgets. In today's fast-paced world, effective financial management is crucial, and this application serves as a valuable tool to help users track their financial health and work towards their financial goals.

Project Description:

The B&E TRACKER application is built with a focus on usability, accessibility, and functionality. It offers a wide range of features to empower users in managing their finances:

User Registration and Authentication:

Users can create personalized accounts with secure authentication, ensuring the privacy of their financial data. Also users can set up reminders for upcoming bills or budget

Expense and Income Tracking:

Users can effortlessly record their income and expenses, categorizing each transaction for better organization.
Detailed transaction information includes date, category, description, and amount.

Budget Creation and Monitoring:

Users can set up budget goals for various spending categories, helping them plan and control their expenditures.
Real-time tracking provides insights into how actual spending compares to budgeted amounts.

Interactive Dashboards:

The application features interactive and visually appealing dashboards that display summaries of income, expenses, and budget progress.

Reporting and Analysis:

Users can generate detailed financial reports, view historical data, and gain insights into their spending habits over time.

Expense Categories:

The Budget Tracker offers a wide range of predefined expense categories, which users can customize to suit their preferences.

Cross-Device Compatibility:

Built using HTML, CSS, JavaScript, and PHP, the Budget Tracker is accessible on various devices, including desktops, tablets, and smartphones.

2.2 TECHNOLOGIES USED

Front-End Technologies:

HTML (Hypertext Markup Language):
HTML is the base of the B&E Tracker's user interface.
It is used to create the structure and layout of web pages, defining the elements like forms, buttons, tables, and headings.
HTML forms are used for user input, allowing users to add and edit financial transactions, set budget goals, and interact with the application.

CSS (Cascading Style Sheets):
CSS plays a crucial role in the visual design and responsiveness of the Budget Tracker.
It is responsible for styling elements, including fonts, colors, margins, and padding, ensuring a visually appealing and consistent user interface.
CSS media queries make the application responsive, adapting to various screen sizes and devices, such as desktops, tablets, and smartphones.

JavaScript:
JavaScript is used extensively for enhancing user interactivity and providing dynamic functionality.
It facilitates real-time calculations, such as updating account balances after transactions, calculating spending percentages, and generating interactive charts.
JavaScript is employed for form validation, ensuring that users provide accurate data and receive feedback on errors.
It enables responsive user interactions, like pop-up notifications, alerts for budget milestones, and asynchronous data loading for improved user experience.

Back-End Technologies:

PHP (Hypertext Preprocessor):
PHP serves as the server-side scripting language for the B&E Tracker's back-end operations. It handles user requests, processes form submissions, and communicates with the MySQL database to retrieve, insert, update, or delete financial data. PHP dynamically generates HTML content based on user input, allowing users to view and manage their financial information securely.

Database Management:

MySQL: MySQL is used as the relational database management system (RDBMS) to store and manage financial data. It stores user account information, income, expenses, budget details, and transaction history in structured tables. MySQL ensures data integrity, provides efficient querying capabilities, and supports secure data storage practices, safeguarding users' financial information.

3. MODULE DESCRIPTION

LOGIN MODULE:

1. User Registration:

The user registration process allows individuals to create their accounts within the Expense Tracker application. This is typically the first interaction a user has with the system.

Functionality:

New users provide their personal information, including a username, email address, and a secure password during registration.

The registration form may include additional fields such as name, profile picture, and contact details, depending on the application's requirements.

The system validates the user's input, checking for valid email formats, password strength, and unique username or email.

If the input is valid, the user's data is securely stored in the application's database, often with password hashing for security.

Upon successful registration, the user may receive a confirmation email to verify their email address, enhancing account security.

2. User Login:

The login process allows registered users to access their accounts and use the Expense Tracker application's features and functionalities.

Functionality:

Users enter their registered email address (or username) and password into the login form.

The application validates the user's credentials by checking if the email (or username) exists in the database and comparing the provided password with the stored, hashed password.

If the provided credentials match those in the database, the user is granted access to their account, and they are redirected to their dashboard or the application's main interface.

Session management is employed to maintain user authentication during their session, so they don't have to log in repeatedly while using the application.

3. Account Management:

Once logged in, users can manage their accounts and perform various actions related to their profile.

Functionality:

Users can update their profile information, including their password, email address, and other personal details.

In some applications, users can set preferences, such as notification settings or theme choices.

Account recovery features, like password reset, are available to help users regain access to their accounts in case they forget their password. Account deletion functionality may be provided for users who wish to remove their accounts and associated data.

BUDGET MODULE:

1. Budget Creation:

Users can create budgets for specific spending categories or expense types. For example, they may set a monthly budget for groceries, entertainment, or rent.

Functionality:
Users specify the budget amount they want to allocate to a particular spending category.
The application may provide predefined budget categories (e.g., groceries, transportation) for convenience, but users can often create custom categories as well.
Users can set the duration of the budget, such as monthly, quarterly, or yearly, based on their financial planning preferences.

2. Budget Tracking:

After setting up budgets, users can track their spending against these predefined limits to ensure they stay within their financial goals.

Functionality:
The application continuously monitors and updates the user's spending within each budget category.
As users log expenses, the application deducts the expense amount from the corresponding budget category.
Users can view the remaining budget amount for each category in real-time, helping them stay informed about their financial status.

3. Budget Alerts and Notifications:

The budget module often includes alert and notification features to keep users informed about their budget progress.
Functionality:
Users can set alerts to receive notifications when they approach a certain percentage of their budget limit (e.g., 80% spent).
Notifications can be sent through various channels, such as email, push notifications, or in-app alerts.
These alerts serve as proactive reminders to help users avoid overspending in specific categories.

4. Integration with Transaction Data:

The budget module seamlessly integrates with the application's transaction data, ensuring that expenses are accurately reflected in the corresponding budget categories.

Expenses logged by the user are automatically categorized and allocated to the appropriate budget category. Users can review their transactions and see how each expense contributes to their budget utilization.

5.Integration with Transaction Data:

The budget module seamlessly integrates with the application's transaction data, ensuring that expenses are accurately reflected in the corresponding budget categories.

Functionality:

Expenses logged by the user are automatically categorized and allocated to the appropriate budget category.

Users can review their transactions and see how each expense contributes to their budget utilization.

EXPENSE MODULE

1. Expense Categories:

Expense categories are predefined or customizable labels used to categorize expenses, providing structure to the user's financial data.

Functionality:

The application may offer a set of predefined expense categories for common expenditures (e.g., housing, transportation, dining out).

Users can create custom categories to align with their specific financial tracking needs.

Assigning expenses to categories allows for organized and meaningful expense analysis.

2. Expense Editing and Deletion:

Users have the ability to edit or delete logged expenses, enabling them to correct errors or update transaction details.

Functionality:

Users can access their list of logged expenses and choose a specific entry to edit.

Edits can include changing the date, category, description, or amount.

Users can also delete individual expenses to maintain accurate records.

3. Expense Search and Filtering:

This feature allows users to search for specific expenses or apply filters to narrow down their expenses based on criteria such as date range, category, or custom tags.

Functionality:

Users can search for expenses by entering keywords or specific transaction details.

Filters can be applied to view expenses within a specific time frame (e.g., this month, last year) or within particular expense categories.

Custom tags or labels may be used to further categorize or group expenses.

4. Integration with Budgets:

The expense module is often integrated with the budget module, ensuring that expenses are allocated to the appropriate budget categories.

Functionality:

Expenses logged by the user are automatically categorized and allocated to the corresponding budget category if one exists.

Users can see how their actual expenses align with their budgeted amounts, helping them manage their spending within budgetary constraints.

EXPENSE REPORT MODULE

1. Financial Reporting:

The report module generates detailed financial reports that summarize a user's income, expenses, and overall financial situation. These reports offer a snapshot of the user's financial health over specific time periods.

Functionality:

Users can select the reporting period, such as a specific month, quarter, or year, to focus on.

The application compiles data to produce financial reports that include information like total income, total expenses, net income (income minus expenses), and savings.

Reports may include graphical representations (e.g., pie charts, bar graphs) to provide a visual overview of income sources, expense categories, and spending trends.

2. Expense Breakdown:

This feature provides a breakdown of expenses by category, helping users understand where their money is being spent.

Functionality:

Users can view reports that categorize expenses by predefined or custom expense categories.

The application displays the percentage of total expenses attributed to each category, making it easy for users to identify areas where they are allocating the most funds.

Visual representations like pie charts or bar graphs offer a clear visualization of expense distribution.

3. Income Analysis:

The report module may include an income analysis section that summarizes the sources of a user's income.

Functionality:

Users can view reports that detail income sources, such as salary, investments, or side income.

Income reports may include information like the contribution of each income source to the overall income, helping users understand where their income is coming from.

4. Budget vs. Actual Comparison:

Users can compare their actual spending against their budgeted amounts, providing insights into whether they are staying within budgetary limits.

Functionality:

The application generates reports that show how much of the budgeted amount has been spent in each expense category.

Users can see where they have overspent or where they have managed to save within their budgeted categories.

Visual representations make it easy to understand budget variances.

5. Data Analysis:

Users can access historical data to track their financial progress over time and identify trends in their income and spending.

Functionality:

Reports may include historical data, allowing users to compare their current financial situation with previous months or years.

Users can identify patterns in their financial behavior, such as seasonal fluctuations in spending or changes in income sources.

6.Integration with Budgets:

The expense module is often integrated with the budget module, ensuring that expenses are allocated to the appropriate budget categories.

Functionality:

Expenses logged by the user are automatically categorized and allocated to the corresponding budget category if one exists.

Users can see how their actual expenses align with their budgeted amounts, helping them manage their spending within budgetary constraints.

DATABASE DESIGN

1. Database Structure:

The database design defines the structure of the database, including the tables, relationships, and fields that will store and organize data.

Tables represent different entities in the application, such as users, expenses, income sources, categories, budgets, and reports.

Fields within each table represent attributes or properties of the entities. For example, the "Expenses" table might include fields like "Date," "Category," "Description," and "Amount."

Relationships establish connections between tables. For instance, there may be a relationship between the "Expenses" table and the "Categories" table to associate each expense with a specific spending category.

2. Data Types:

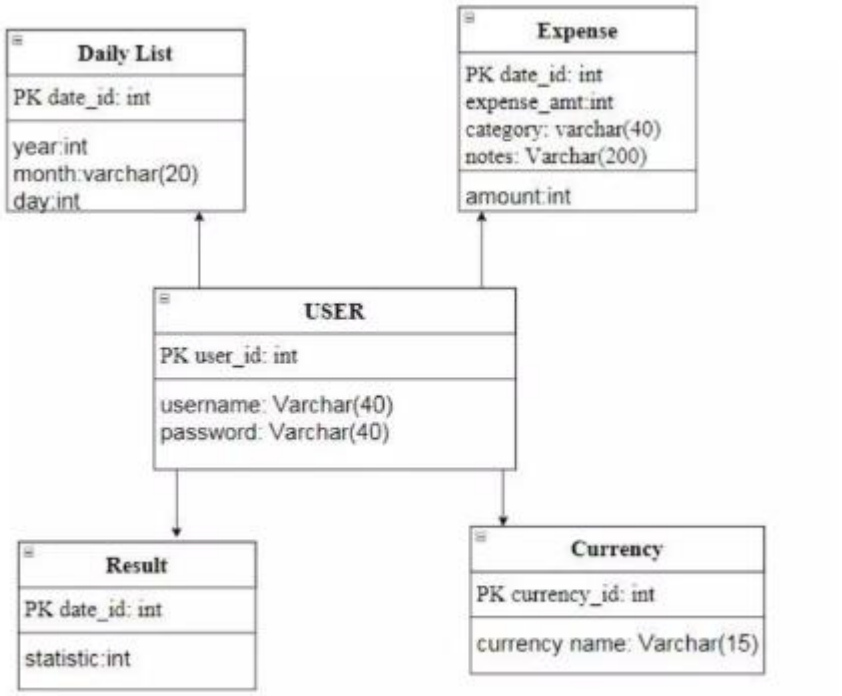
Data types define the format and type of data that can be stored in each field. Choosing appropriate data types ensures data integrity and efficient storage.

Numeric data types are used for fields like amounts or quantities.
Text data types are used for fields like names, descriptions, or categories.
Date and time data types are used for fields like transaction dates or timestamps.
Boolean data types are used for binary values (true/false) such as status flags.

The application have five entities: expense, user, backup, notification, transaction, which have their own data members and methods. Above diagram shows the flow of the functionality from entity to entity. Also, types of data members and methods of

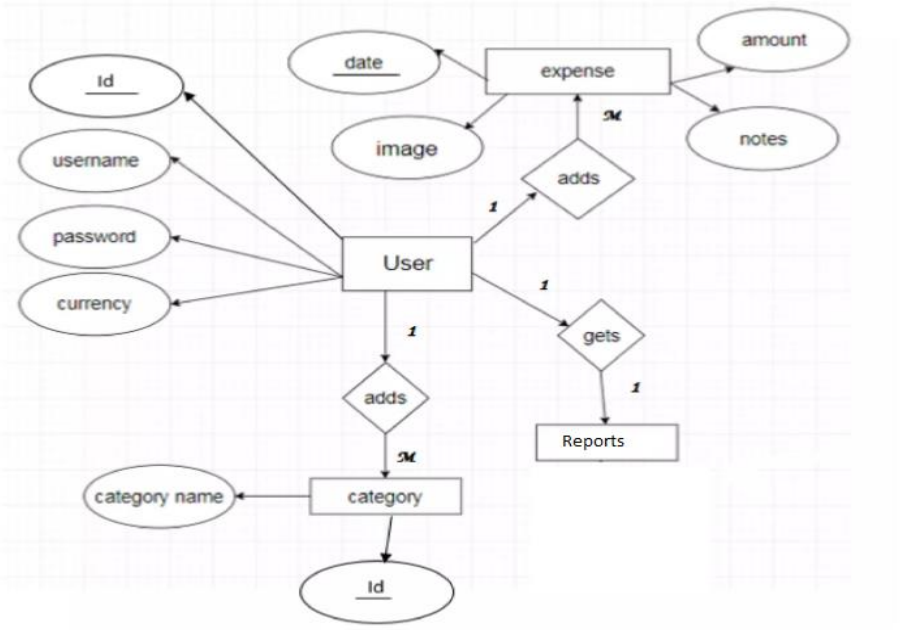
3. Database schema:

There are five tables in our application database which are user, expense, result, income and daily list. In above diagram the tables covers their respective primary key and their fields.



ENTITY RELATIONSHIP DIAGRAM:

The above diagram explains the relationship between the databases where rectangle represents entity, oval represents attributes and diamond represents relation. There are four entities with their respective attributes.



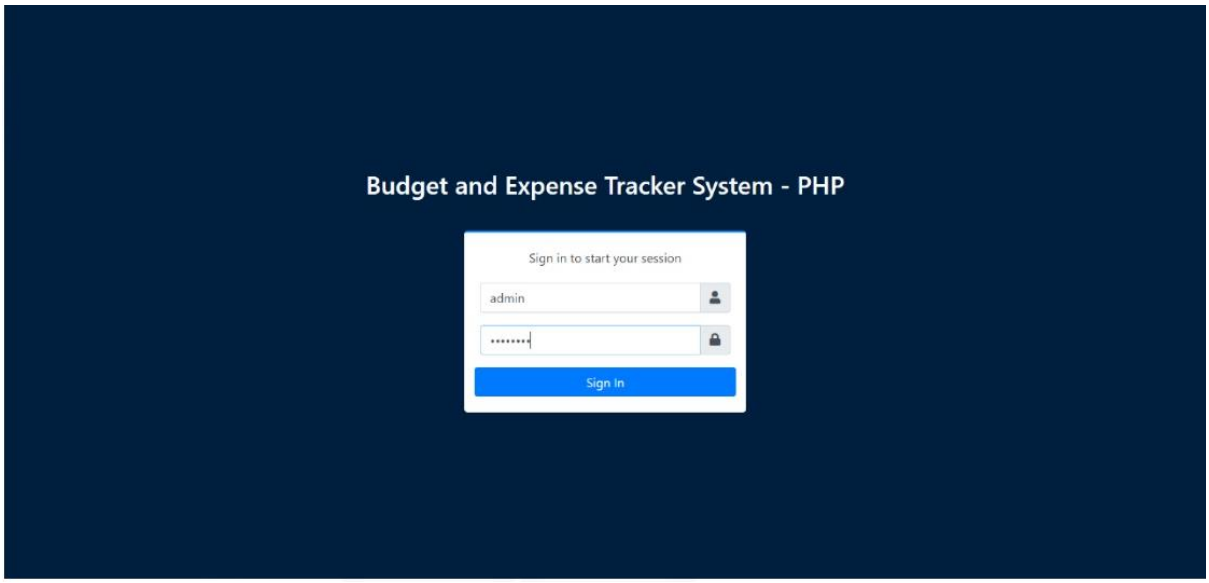
DATABASE CONNECTION:

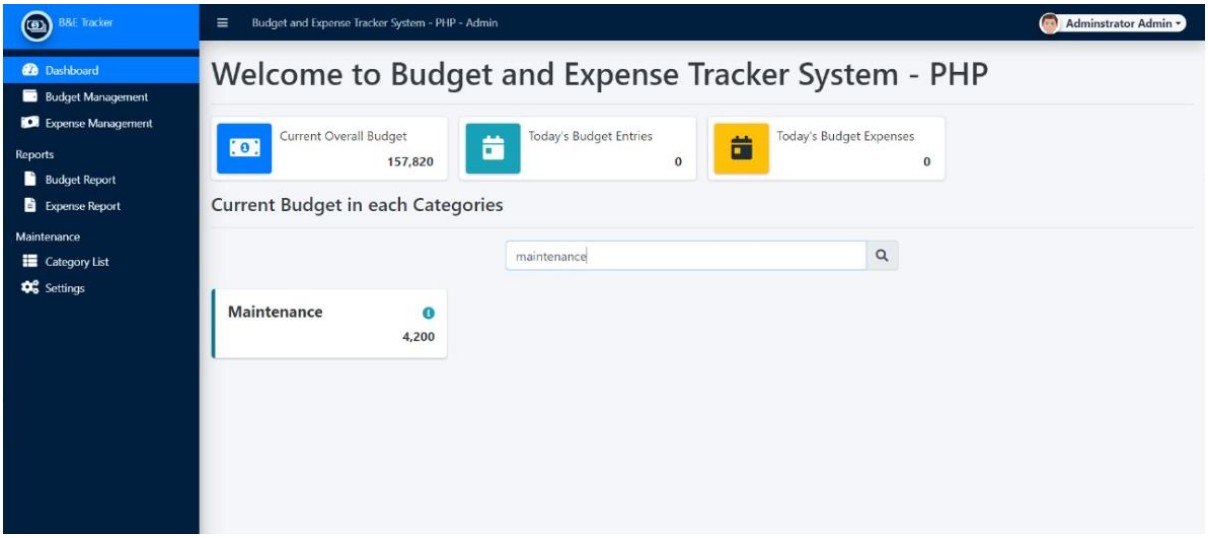
The PHP code snippet establishes a database connection using the MySQLi extension in PHP. This database connection is crucial for accessing and interacting with the database server. Here's a short explanation of how you can use this database connection in a report module within an Expense Tracker application:

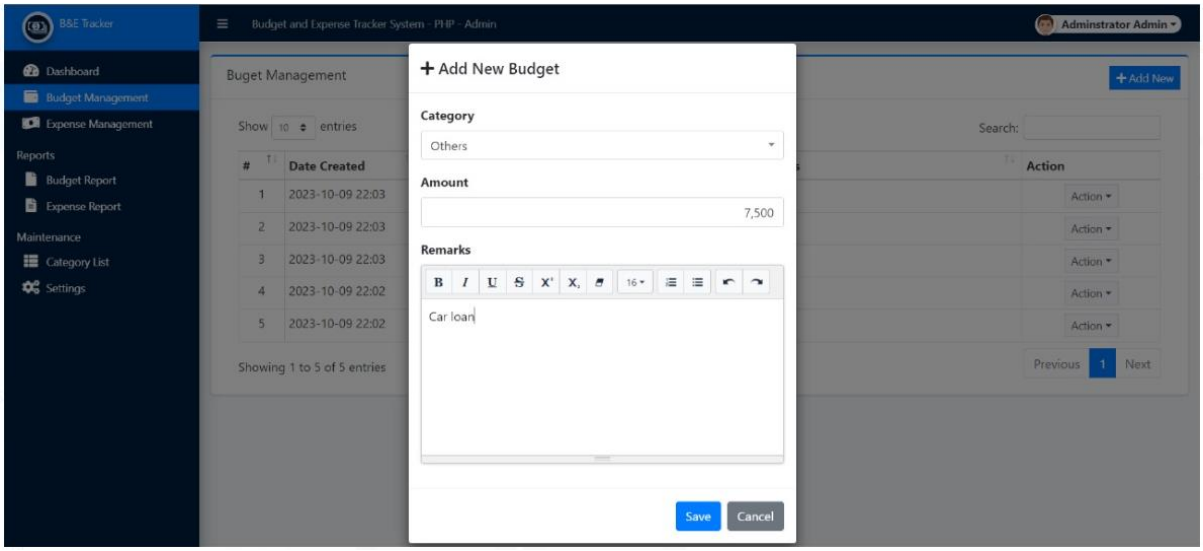
```
<?php
if(!defined('DB_SERVER')){
   require_once("../initialize.php");
}
class DBConnection{
   private $host = DB_SERVER;
   private $username = DB_USERNAME;
   private $password = DB_PASSWORD;
   private $database = DB_NAME;
  public $conn;
  public function __construct(){
      if (!isset($this->conn)) {
```

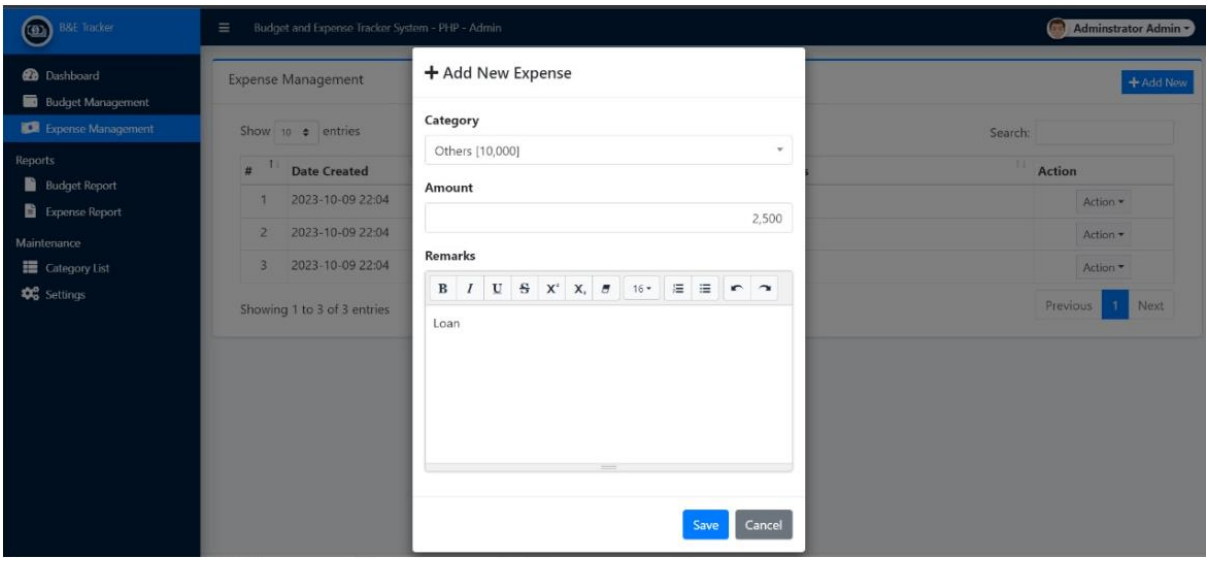
```
      $this->conn = new mysqli($this->host, $this->username, $this->password, $this->database);
          if (!$this->conn) {
             echo 'Cannot connect to database server';
             exit;
          }
       }

   }
   public function __destruct(){
      $this->conn->close();
   }}
?>
```

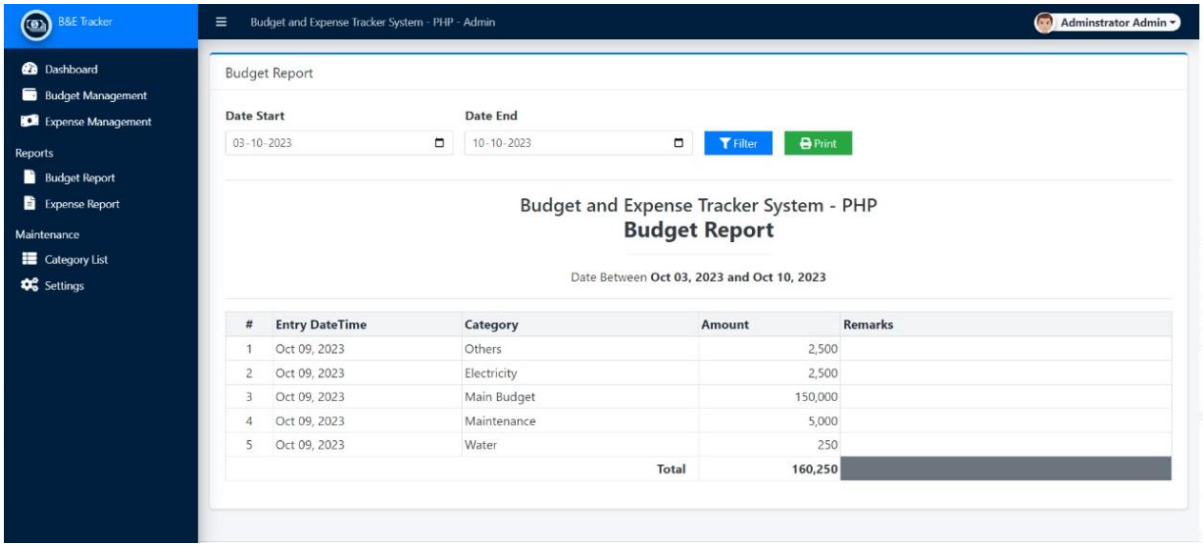
RESULTS:

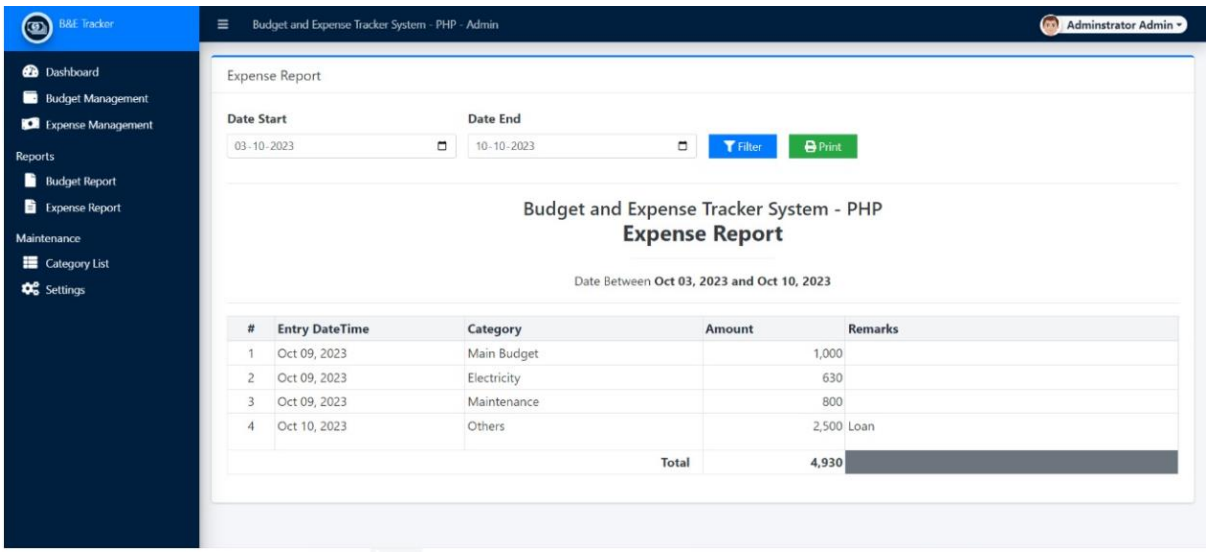


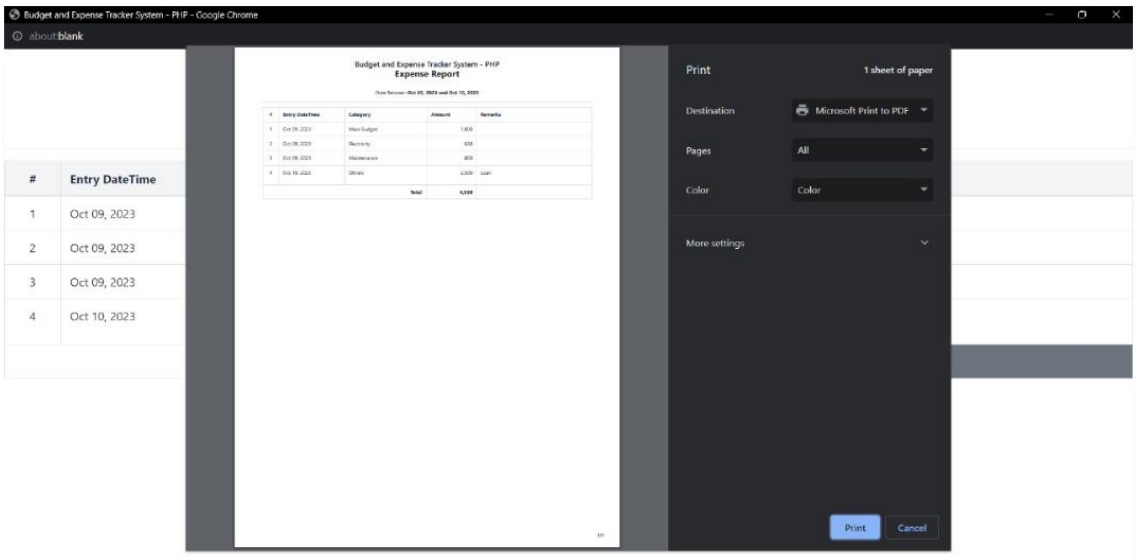

B&E Tracker
Budget and Expense Tracker System - PHP - Admin
Adminstrator Admin
Dashboard
Budget Management
Expense Management
Reports
Budget Report
Expense Report
Maintenance
Category List
Settings
Welcome to Budget and Expense Tracker System - PHP
Current Overall Budget
157,820
Today's Budget Entries
0
Today's Budget Expenses
0
Current Budget in each Categories
maintenance
Maintenance
4,200


B&E Tracker
Budget and Expense Tracker System - PHP - Admin
Adminstrator Admin
Buget Management
Add New
Show 10 entries
Search:
Date Created Action
1 2023-10-09 22:03
2 2023-10-09 22:03
3 2023-10-09 22:03
4 2023-10-09 22:02
5 2023-10-09 22:02
Showing 1 to 5 of 5 entries
Previous 1 Next
Add New Budget
Category
Others
Amount
7,500
Remarks
Car loan
Save
Cancel


B&E Tracker
Budget and Expense Tracker System - PHP - Admin
Adminstrator Admin
Expense Management
Add New
Show 10 entries
Search:
Date Created Action
1 2023-10-09 22:04
2 2023-10-09 22:04
3 2023-10-09 22:04
Showing 1 to 3 of 3 entries
Previous 1 Next
Add New Expense
Category
Others [10,000]
Amount
2,500
Remarks
Loan
Save
Cancel


B&E Tracker
Budget and Expense Tracker System - PHP - Admin
Adminstrator Admin
Dashboard
Budget Management
Expense Management
Reports
Budget Report
Expense Report
Maintenance
Category List
Settings
Budget Report
Date Start
03-10-2023
Date End
10-10-2023
Filter
Print
Budget and Expense Tracker System - PHP
Budget Report
Date Between Oct 03, 2023 and Oct 10, 2023
Entry DateTime Category Amount Remarks
1 Oct 09, 2023 Others 2,500
2 Oct 09, 2023 Electricity 2,500
3 Oct 09, 2023 Main Budget 150,000
4 Oct 09, 2023 Maintenance 5,000
5 Oct 09, 2023 Water 250
Total 160,250


B&E Tracker
Budget and Expense Tracker System - PHP - Admin
Adminstrator Admin
Dashboard
Budget Management
Expense Management
Reports
Budget Report
Expense Report
Maintenance
Category List
Settings
Expense Report
Date Start
03-10-2023
Date End
10-10-2023
Filter
Print
Budget and Expense Tracker System - PHP
Expense Report
Date Between Oct 03, 2023 and Oct 10, 2023
Entry DateTime Category Amount Remarks
1 Oct 09, 2023 Main Budget 1,000
2 Oct 09, 2023 Electricity 630
3 Oct 09, 2023 Maintenance 800
4 Oct 10, 2023 Others 2,500 Loan
Total 4,930


Budget and Expense Tracker System - PHP - Google Chrome
about:blank
Budget and Expense Tracker System - PHP
Expense Report
Print
1 sheet of paper
Destination
Microsoft Print to PDF
Pages
All
Color
Color
More settings
Print
Cancel
Entry DateTime
1 Oct 09, 2023
2 Oct 09, 2023
3 Oct 09, 2023
4 Oct 10, 2023

CONCLUSION:

In conclusion, the Expense Tracker application is designed to empower users in managing their finances effectively. It provides users with a user-friendly interface and a comprehensive set of features to track and analyze their income, expenses, budgets, and financial progress.

The application's architecture includes essential modules, such as user authentication, expense tracking, budget management, report generation, and database connectivity. These modules work in harmony to provide users with a seamless and informative experience in managing their financial resources.

User authentication ensures the security of user data, while the expense module allows users to log their expenses efficiently, categorize them, and gain insights into their spending habits. The budget module empowers users to set and manage spending limits, while the report module delivers visual and detailed summaries of financial data, aiding users in making informed financial decisions.

The database design is a crucial underpinning of the application, enabling efficient storage, retrieval, and management of financial data. It ensures data integrity and security, critical aspects of any financial application.

In summary, the Expense Tracker application is a valuable resource for individuals seeking to take control of their finances, monitor their spending, and work toward financial goals. With its user-friendly interface, robust features, and secure database design, it provides a comprehensive solution for effective financial management. This application serves as a tool to promote financial discipline and financial well-being for its users.