EXPENSO Expense Tracker App

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1. INTRODUCTION

An expense tracker application is a valuable tool that can help people and businesses to track their spending and manage their finances more effectively.

This report aims to provide an overview of the features, benefits, and challenges of building an expense tracker application. It will cover the importance of budgeting, the need for expense tracking, and how an expense tracker application can simplify the process.

Additionally, the report will discuss the various components of the application, such as user interface,diagrams, and security.

Using an expense tracker app, users can create and manage budgets, track expenses and income in real-time, identify areas where they can save money, and gain greater control over their finances. Ultimately, the objective of this expense tracker app is to help users achieve their financial goals and improve their overall financial well-being.

2.OBJECTIVE

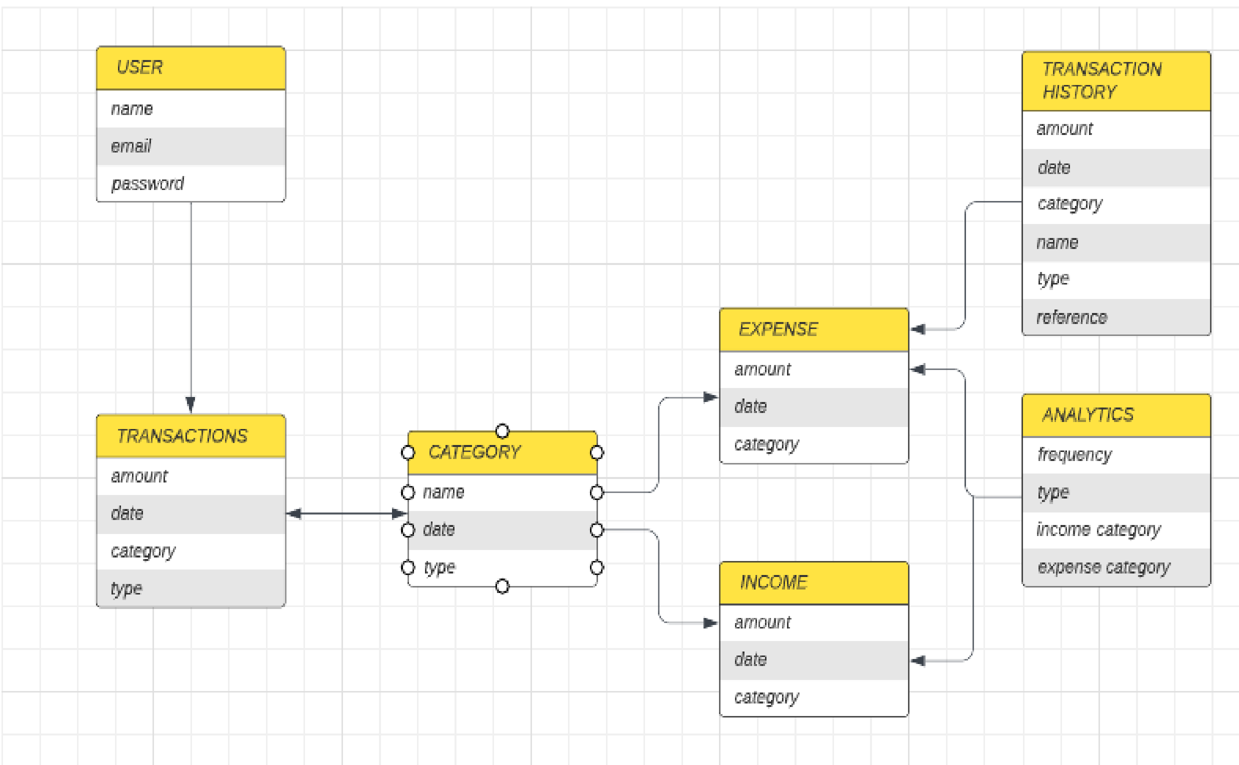
The objective of an expense tracker app is to help individuals or businesses manage their finances more effectively by providing a user-friendly and intuitive tool to record, categorize, and analyze financial transactions. The app's main goal is to provide users with a clear understanding of their financial situation, so they can make informed and calculated decisions about their spending and saving habits. By using an expense tracker app, users can create and manage budgets, track their expenses, save money, and gain greater control over their finances. Ultimately, the objective of an expense tracker app is to help users achieve their financial goals and improve their overall financial well-being.

3.TOOLS/ENVIRONMENT

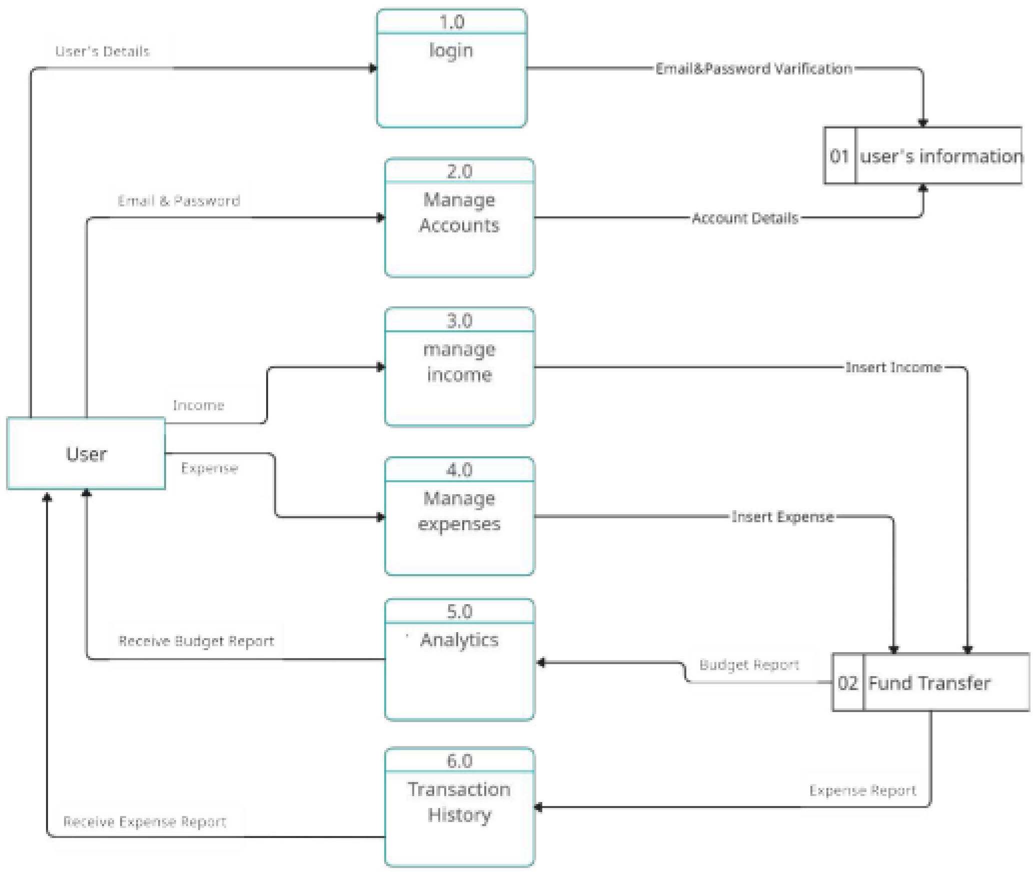
1. ReactJS- For Front End
2. Mantine For Design
3. Firebase- For Backend
4. Redux Toolkit

4. ANALYSIS DOCUMENTS

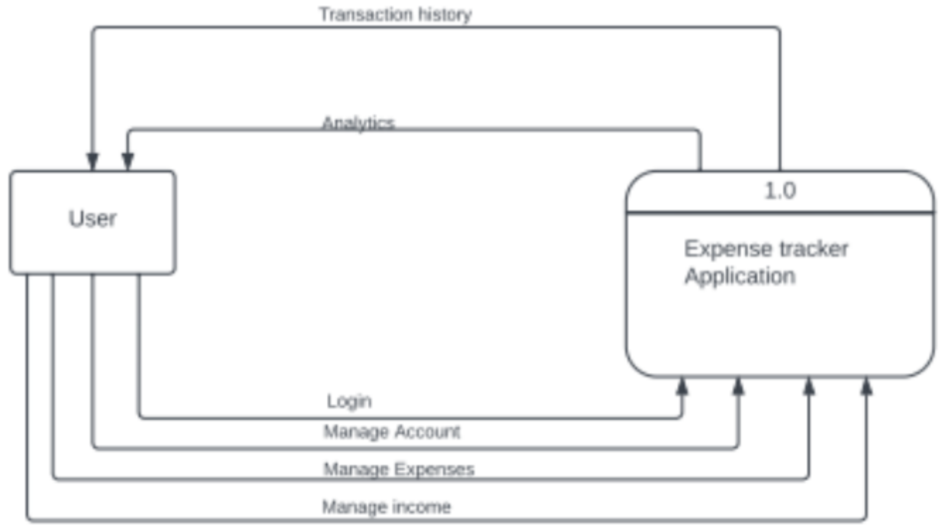
4.1 E-R DIAGRAM:



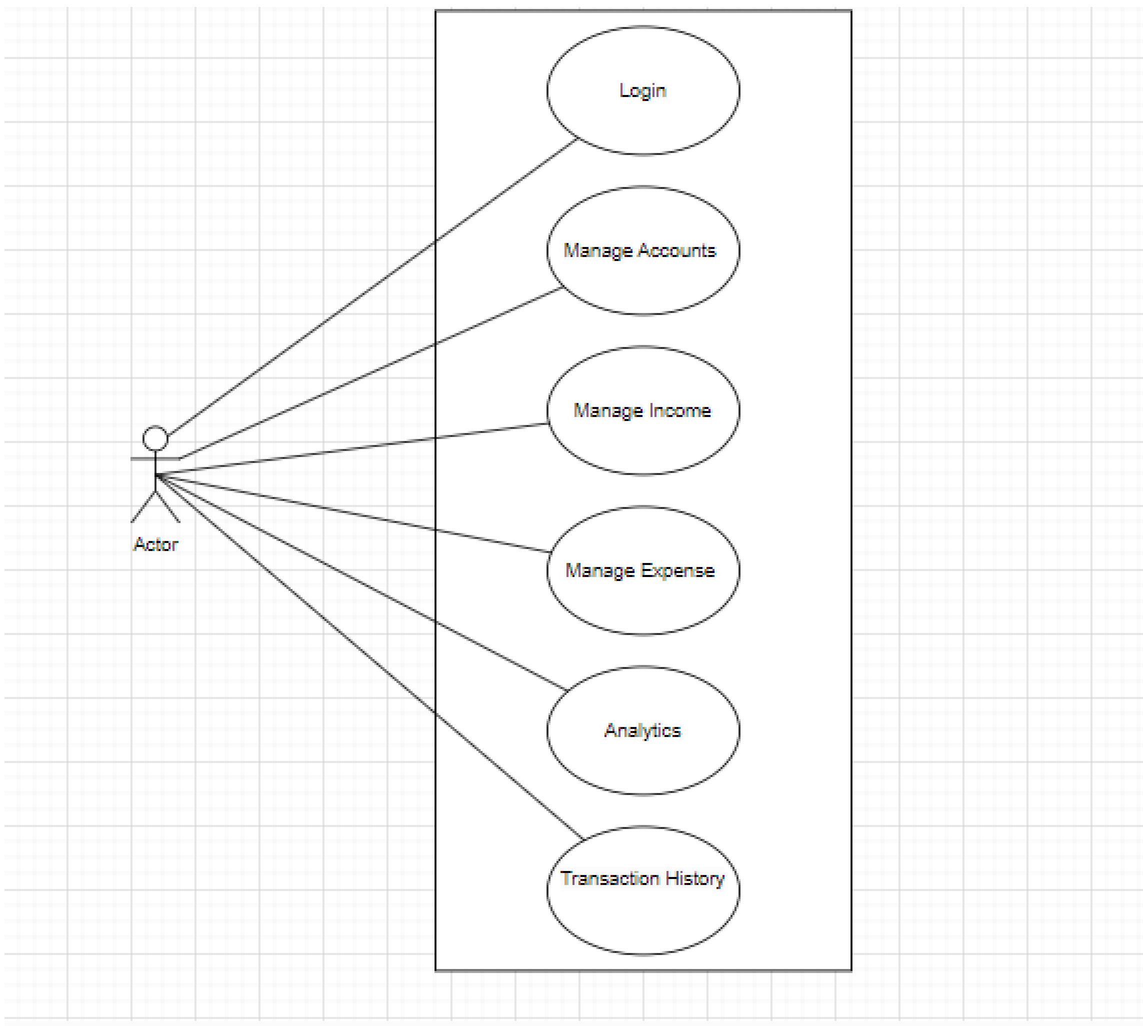
4.2 DATA FLOW DIAGRAM:



4.3 SYSTEM CONTEXT DIAGRAM:



4.4 USECASES DIAGRAM:



TESTING

Unit Test Cases

1. Login:

TEST CASE NO.	ACTION	INPUT	EXPECTED OUTPUT	TEST RESULT
Test Case 1.	Valid Credentials: Enter the correct username and password and check if the user is able to log in successfully.	UserName: admin@admin.com Password: *******	Login Successfully	Login Successfully
Test Case 2.	Username Field: Check if the username field accepts valid inputs such as alphanumeric characters, special characters, and is not case-sensitive.	Input field	Input field with validation	Input field with validation
Test Case 3.	Password Field: Check if the password field is masked or not. Verify that the password field does not display the password in plain text.	Password:******	Password Field that does not show typed text	Password Field that does not show typed text
Test Case 4.	Field Validation: Check if the login page has proper validation for all input fields, such as username and password length, required fields, etc.	Username Testfield Password field	Display Username Testfield Password Field	Successfully Display Username TestField and Password Field

2.Registration:

TEST CASE NO.	ACTION	INPUT	EXPECTED OUTPUT	TEST RESULT
Test Case 1.	Verify that clicking the "click to register" button/link takes the user to the registration page.	Register Button	Redirect to Registration Page	Redirect Successfully
Test Case 2.	Verify that the registration page contains all required fields for registration, such as name, email, password, and confirmation password.	Input field for Email, name , password	Registration done successfully	Registration done successfully
Test Case 3.	Verify that appropriate error messages are displayed if the user attempts to register with already existing credentials.	none	Display error message: user already exists	Error message displayed
Test Case 4.	Verify that the registered user's information is correctly stored in the database and can be retrieved for future use.	none	Data reflected in Firebase	Integration

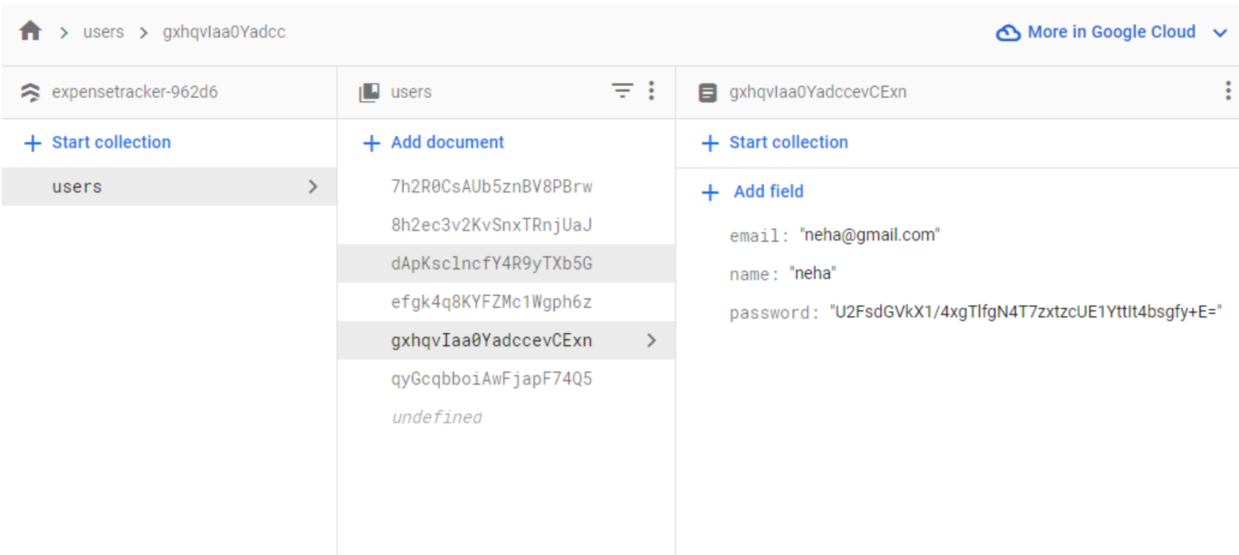
3. Add Transaction:

TEST CASE NO.	ACTION	INPUT	EXPECTED OUTPUT	TEST RESULT
Test Case 1.	Verify that a user can add a transaction by entering valid information, such as transaction date, amount, category, and description.	Transaction form With input Fields	Display added information	Transaction added Successfully
Test Case 2.	Verify that the transaction is correctly saved and displayed in the user's transaction history.	none	Transaction done successfully	Transaction done successfully
Test Case 3.	Verify that appropriate error messages are displayed if the user enters invalid data	none	Display error message: invalid transaction	Error message displayed
Test Case 4.	Verify that the user is able to view their transaction history and filter transactions by date.	none	Transaction table form	Transactions displayed

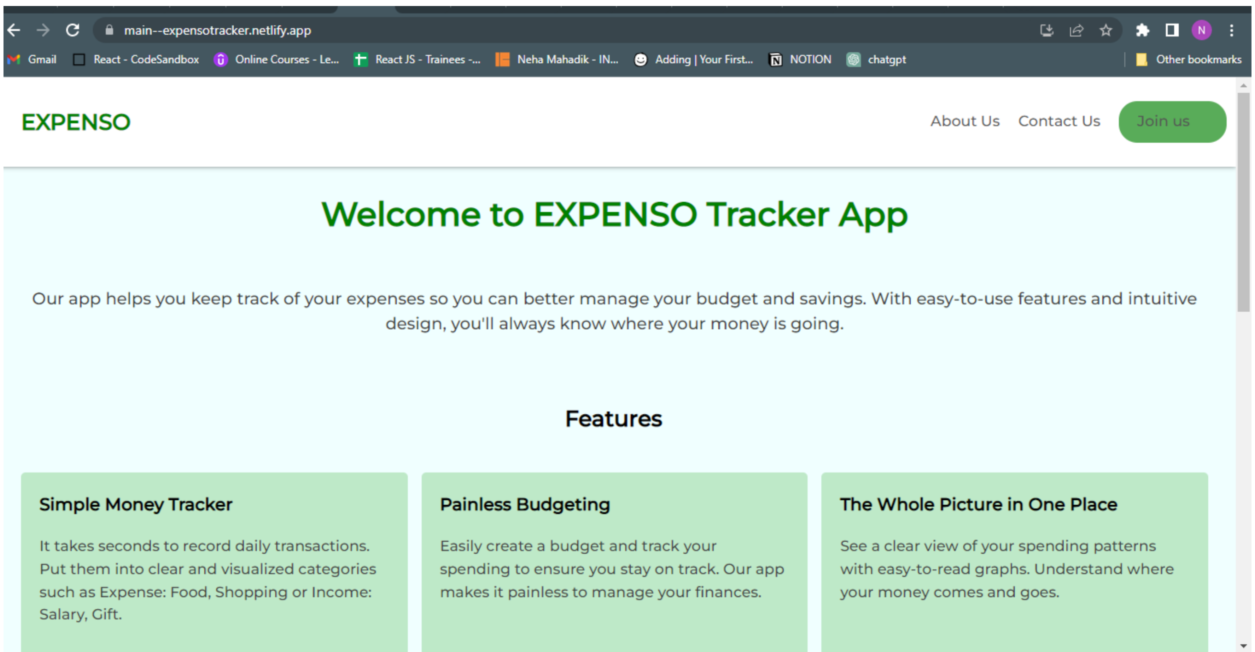
4.Analytics:

TEST CASE NO.	ACTION	INPUT	EXPECTED OUTPUT	TEST RESULT
Test Case 1.	Verify that the app can generate a report of all expenses for a selected	none	Display Analytics	Transaction added Successfully
Test Case 2.	Verify that the app can export the generated report in a suitable format (e.g., CSV, PDF).	none	Transaction done successfully	Transaction done successfully

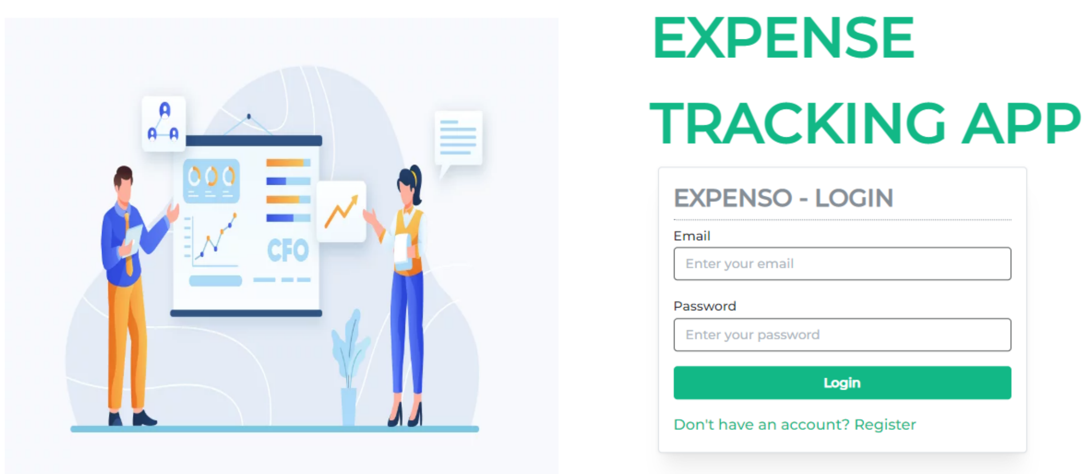
Integration Testing and Security



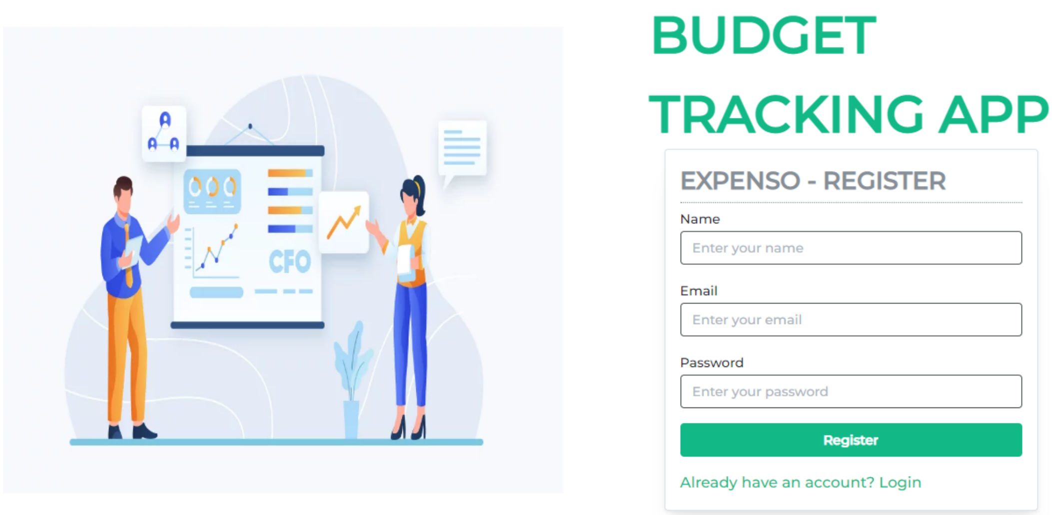
Screen Shots from the App



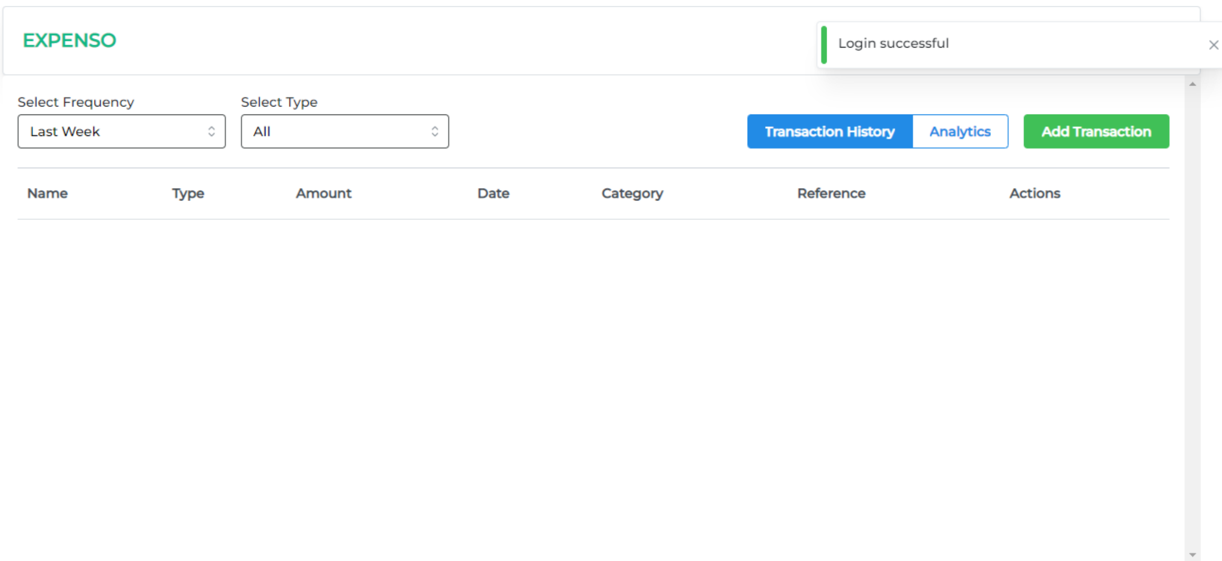
<u>HOME PAGE</u>


EXPENSE
TRACKING APP
EXPENSO - LOGIN
Email
Enter your email
Password
Enter your password
Login
Don't have an account? Register
CFO

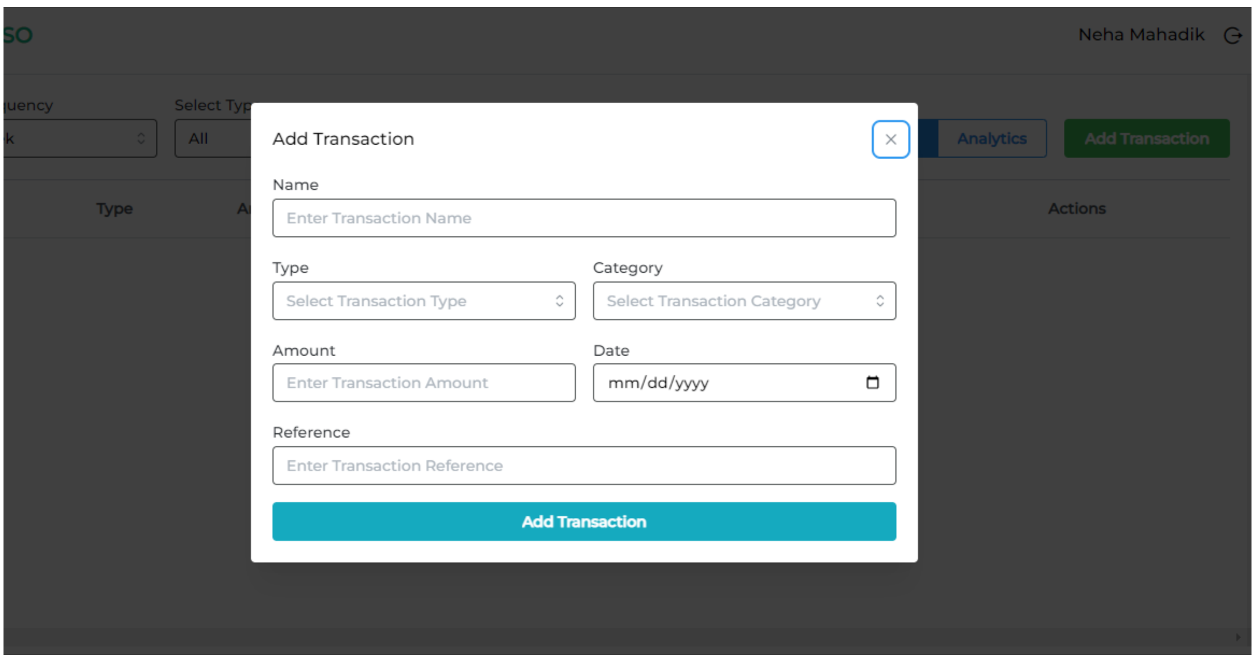
LOGIN PAGE



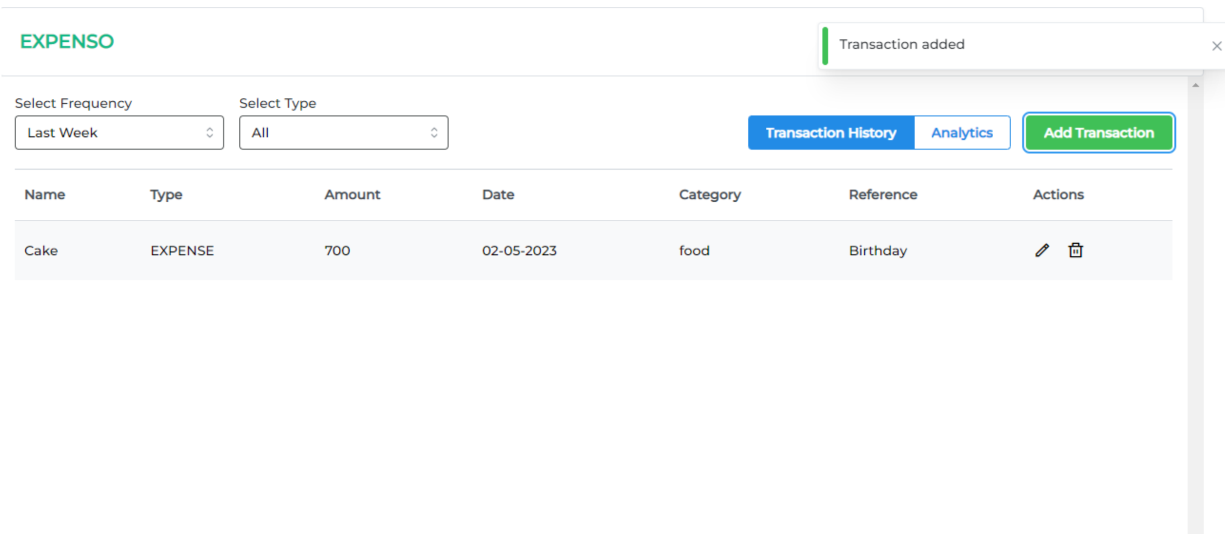
REGISTRATION PAGE


EXPENSO
Login successful
Select Frequency
Last Week
Select Type
All
Transaction History
Analytics
Add Transaction
Name
Type
Amount
Date
Category
Reference
Actions

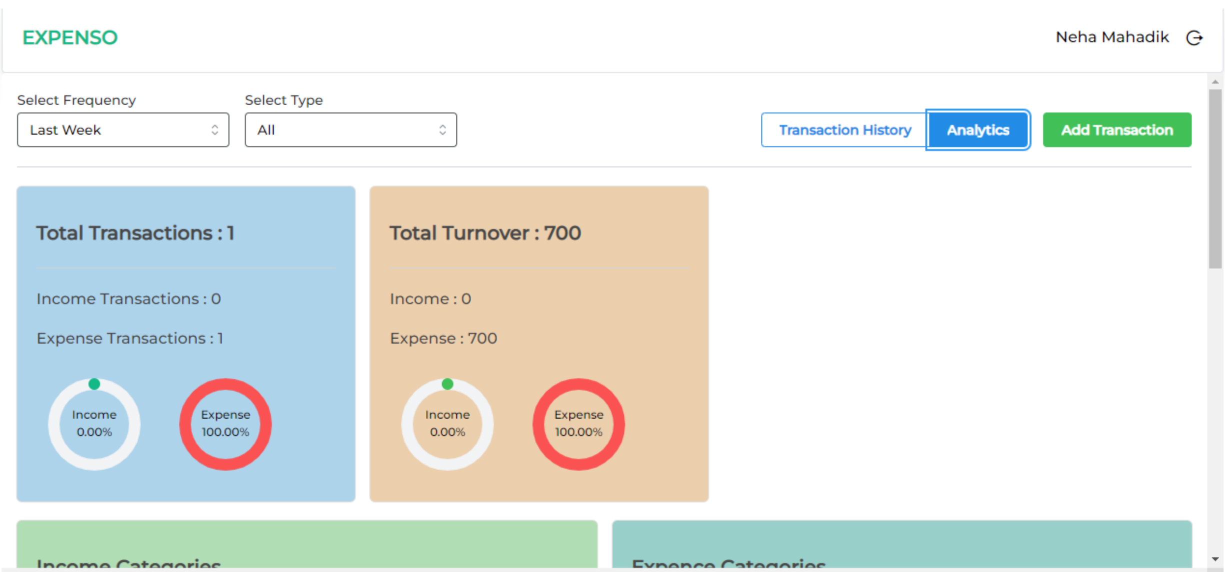
HOME



<u>TRANSACTION FORM</u>



<u>TRANSACTION TABLE</u>


EXPENSO
Neha Mahadik
Select Frequency
Last Week
Select Type
All
Transaction History
Analytics
Add Transaction
Total Transactions : 1
Income Transactions : 0
Expense Transactions : 1
Income 0.00%
Expense 100.00%
Total Turnover : 700
Income : 0
Expense : 700
Income 0.00%
Expense 100.00%

ANALYTICS

LIMITATIONS

While an expense tracker can be a useful tool for managing personal or business finances, there are some limitations to consider:

1. **Limited accuracy:**

   Expense trackers rely on manual input from the user, which can lead to errors. It is important to review and double-check entries to ensure accuracy.

2. **Limited scope:**

   Expense trackers may only track certain types of expenses, such as those related to business travel or personal purchases. They may not track more complex financial transactions, such as investments or loans.

3. **Time-consuming:**

Recording every transaction and categorizing expenses separately can be time-consuming, which may discourage some users from using the tool consistently.

4. **Dependence on technology:**

   An expense tracker may rely on technology to function properly. Any technical issues or system failures could impact the accuracy and reliability of the data.

FUTURE SCOPE

As technology continues to advance, there are many potential future applications of expense tracker apps. Here are a few scopes

1. **Artificial intelligence and machine learning:**

Expense tracker apps could leverage artificial intelligence and machine learning to provide more accurate and personalized insights into a user's spending habits. For example, the app could use algorithms to detect patterns in the user's spending behavior and suggest ways to save money or optimize spending.

2. **Integration with financial institutions:**

Expense tracker apps could integrate with financial institutions to provide real-time updates on account balances and transactions. This could help users better manage their finances by providing a more complete picture of their financial situation.

3. **Integration with other apps:**

Expense tracker apps could integrate with other apps to provide a more comprehensive view of a user's financial situation. For example, an expense tracker app could integrate with a budgeting app to help users stay on track with their financial goals.