MANIPAL INSTITUTE OF TECHNOLOGY
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Mini Project Report
of
Internet Technologies Lab (CSE 3262)

TRACKIFY ME

Your Personal Expense Tracker

SUBMITTED
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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CERTIFICATE

This is to certify that the project titled **MiniProject Title** is a record of the bonafide work done by **Praveen Varma, Yashwanth Paladugu** submitted in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology (B.Tech.) in COMPUTER SCIENCE & ENGINEERING of Manipal Institute of Technology, Manipal, Karnataka, (A Constituent Institute of Manipal Academy of Higher Education), during the academic year 2022-2023.

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ABSTRACT

Trackify Me is a web-based expense-tracking application developed using the Django web framework and PostgreSQL database. The application allows users to track their expenses, income, categories, and budgets, and set financial goals. The application was designed to be user-friendly and responsive, with a simple and intuitive interface.

The implementation of **Trackify Me** involved following a well-defined methodology that included planning, database design, application development, user interface design, testing and debugging, deployment, and maintenance and updates. The use of Django and PostgreSQL ensured that the application was secure, efficient, and reliable.

The implementation of **Trackify Me** resulted in a fully functional expense-tracking web application that met the initial requirements and provided users with a reliable and easy-to-use platform for managing their finances.

INTRODUCTION

Trackify Me is a web application developed using the Django web framework and PostgreSQL database that provides a platform for users to track their expenses and income, set budgets, and generate reports. Personal finance management is a critical aspect of a healthy financial life, and Trackify Me aims to provide users with an efficient and effective way to track their expenses and income. The application is developed using the Model-View-Template (MVT) architecture, where the model represents the data, the view handles user input and business logic, and the template represents the user interface.

Django is a popular Python web framework that allows developers to quickly and easily build web applications. Django provides a lot of built-in functionality such as user authentication, URL routing, and database ORM that speeds up the development process. It also has a large community and a rich ecosystem of third-party packages that can be used to add additional functionality to applications.

In **Trackify Me**, Django is used to build a user-friendly expense tracker that allows users to track their expenses and income easily. It provides features like user authentication, CRUD (Create, Read, Update, Delete) operations on expense records, filtering and sorting of expenses, and graphical representation of expenses.

Overall, Django provides a robust and scalable framework for building web applications, making it an ideal choice for **Trackify Me** project.

PROBLEM STATEMENT

Managing personal finances can be a challenging and time-consuming task, especially for individuals with busy schedules or limited financial knowledge. Many existing expense-tracking applications are either too complex or lack essential features, making it difficult for users to effectively monitor their spending habits.

The goal of the **Trackify Me** project is to address these issues by developing a simple, yet powerful, expense-tracking application that allows users to easily manage their finances. The application will provide users with a user-friendly interface to add and categorize expenses, view spending trends, and set budgets for different expense categories.

The **Trackify Me** application will leverage the Django web framework and PostgreSQL database to provide a secure and reliable platform for tracking expenses. By providing an intuitive and streamlined user experience, we aim to help users better understand their spending habits and make informed decisions about their finances.

OBJECTIVES

- Gain experience using the Django web framework to build a real-world application, including implementing models, views, and templates, as well as handling user authentication and authorization.

- Gain experience designing and managing a PostgreSQL database, including defining tables and relationships, querying data, and optimizing performance.

- Gain experience with front-end web development technologies such as HTML, CSS, and JavaScript, as well as front-end frameworks like Bootstrap and jQuery, to create a user-friendly interface for the application.

- Develop practical skills that will be useful in future web development projects and in a career as a web developer.

- Acquire knowledge in building web applications, data-driven applications, and more.

Overall, the objectives of the **Trackify Me** project were to provide hands-on experience in a variety of tech skills and to develop a practical and useful tool for managing personal finances. Through achieving these objectives, the project aimed to provide valuable learning experiences for those involved.

METHODOLOGY

The application allows users to create an account and sign in using their email address and password. Once logged in, users can input their expenses and income, categorize them, and view them in a table format. The application provides features for generating reports that show a breakdown of expenses and income over a specified period. Users can also set budgets for different categories and receive email notifications when they exceed their set limit.

The user interface of the application is implemented using HTML, CSS, and JavaScript, and it uses Bootstrap for styling and responsiveness. The application uses PostgreSQL to store user data, such as expenses, income, categories, budgets, and user profile information.

The application also includes features such as password reset, user profile management, and email notifications for password reset and expense limit exceeded. The application is well-documented, and the code is modular, making it easy to extend and customize.

The implementation of **Trackify Me** involved following the Model-View-Template (MVT) architecture provided by Django. The methodology included the following steps:

Planning: The initial step involved identifying the requirements and creating a plan for the application. The requirements were gathered through brainstorming and research, and a list of features was created. The plan included the technologies to be used, the architecture, the development timeline, and the team structure.

Database Design: The next step involved designing the database schema. The schema was designed using PostgreSQL, and the necessary tables were created for storing user data such as expenses, income, categories, budgets, and user profile information.

Application Development: The application was developed using Django, a high-level Python web framework. The application was divided into multiple modules, each module containing the code for a specific feature. The modules were designed to be independent of each other, making it easy to modify and update them as needed.

User Interface Design: The user interface was designed using HTML, CSS, and JavaScript. The Bootstrap framework was used for styling and responsiveness. The design was kept simple and intuitive, with easy-to-use forms and buttons for inputting data.

Testing and Debugging: After the application was developed, it was tested thoroughly to ensure that it was functioning correctly. The testing involved both manual and automated testing, and any issues that were found were resolved through debugging.

Deployment: Once the testing was completed, the application was deployed to a server. The server was set up with the necessary software and configurations to ensure that the application could run smoothly.

Maintenance and Updates: After the deployment, the application was monitored regularly for any issues or bugs that may arise. Any updates or improvements to the application were implemented, and the application was kept up to date with the latest security patches and updates.

In conclusion, the implementation of **Trackify Me** involved a well-defined methodology that included planning, database design, application development, user interface design, testing and debugging, deployment, and maintenance and updates. The use of Django and PostgreSQL made the implementation efficient, secure, and reliable.

RESULTS & SNAPSHOTS

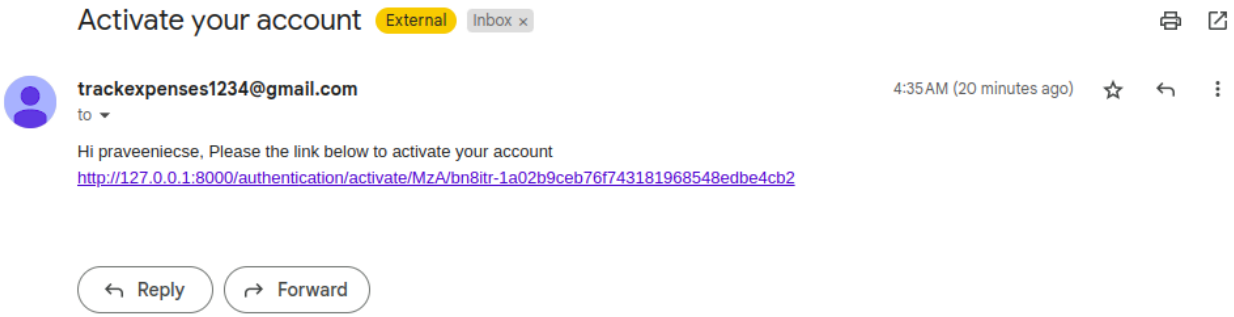
The implementation of Trackify Me resulted in a fully functional expense-tracking web application that met the initial requirements and provided users with an easy-to-use platform for managing their finances. The application allowed users to track their expenses, income, categories, and budgets, and set financial goals.

The application was designed with a responsive and user-friendly interface, making it easy for users to navigate and input data. The use of Django and PostgreSQL ensured that the application was secure, efficient, and scalable.

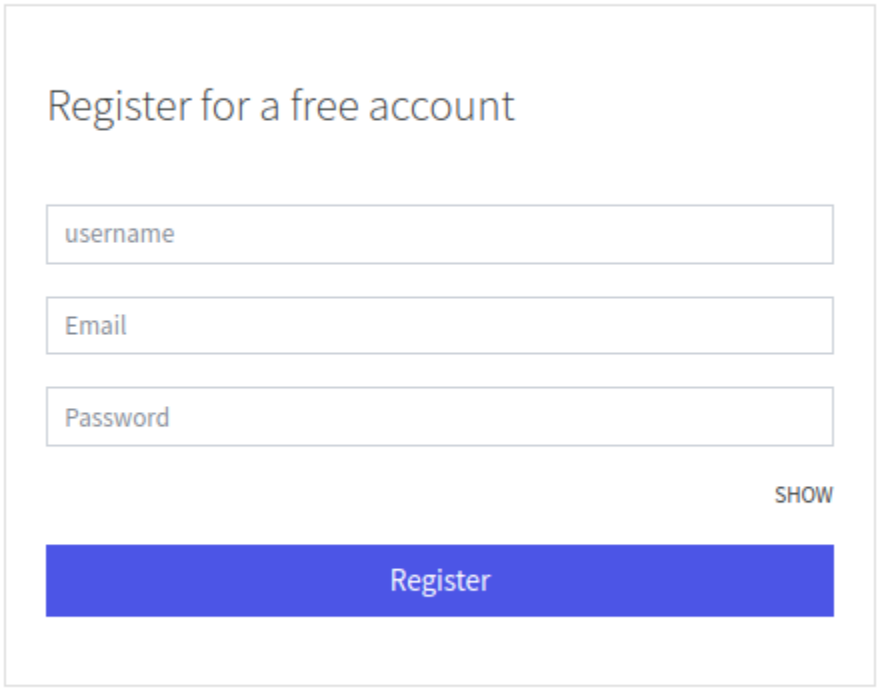
The testing and debugging phase of the implementation resulted in the identification and resolution of various issues and bugs, ensuring that the application was functioning correctly.

The maintenance and updates phase of the implementation involved regular monitoring of the application for any issues or bugs that may arise. Any updates or improvements to the application were implemented promptly, ensuring that the application was up to date with the latest security patches and updates.

Overall, the implementation of Trackify Me was successful, resulting in a fully functional expense-tracking web application that met the initial requirements and provided users with a reliable and easy-to-use platform for managing their finances.

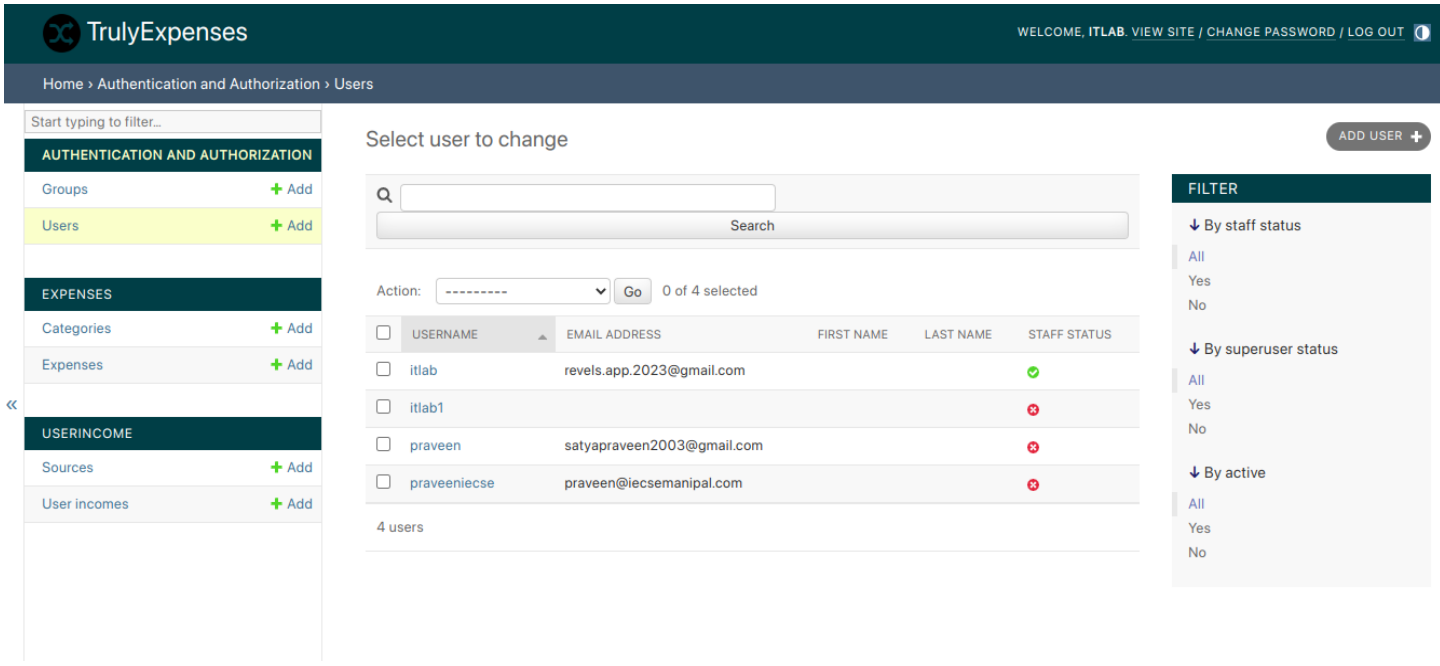


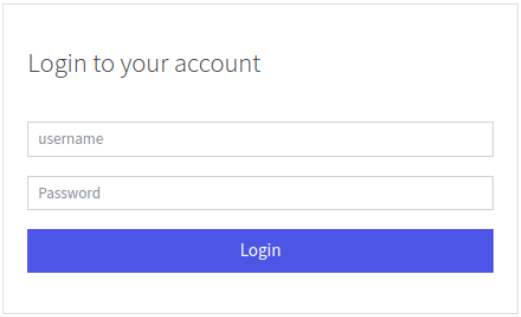
Activate Account Email



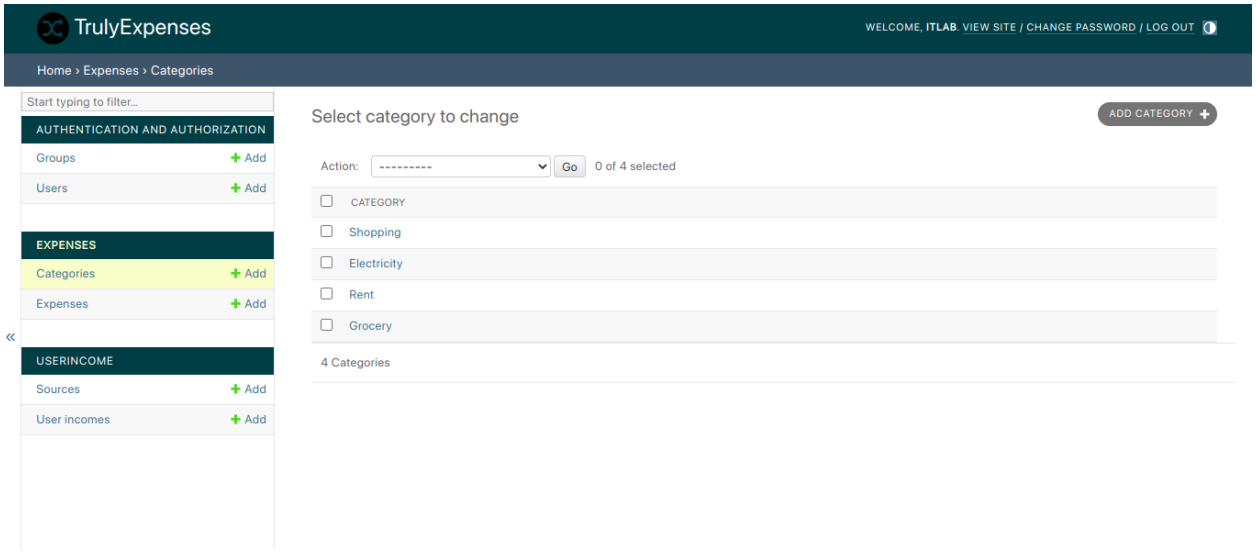
Register Screen

Admin Portal

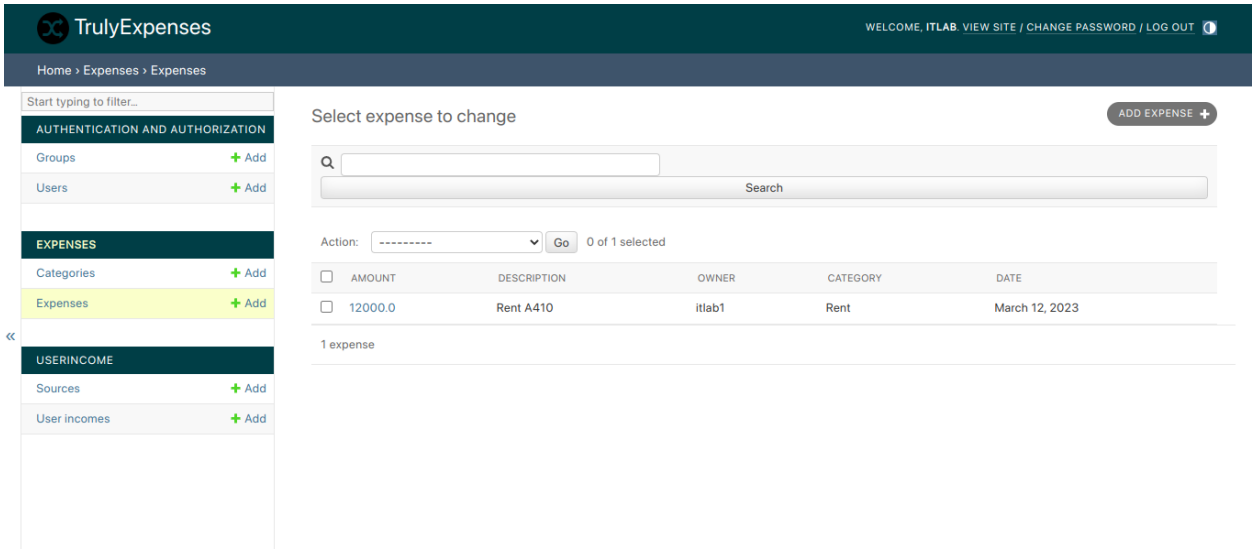


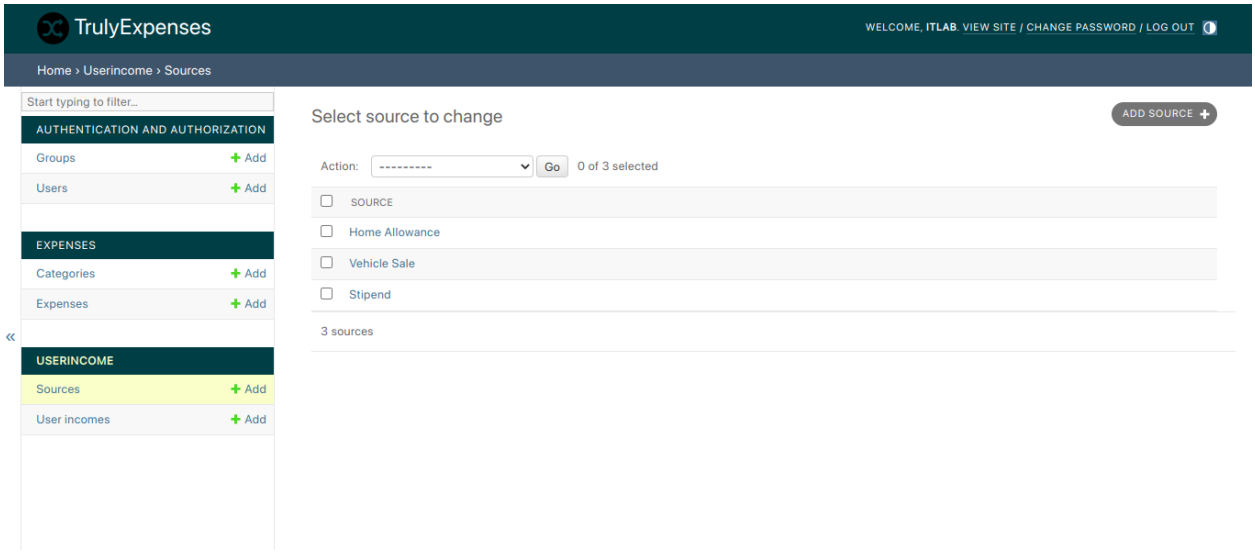


Login Screen

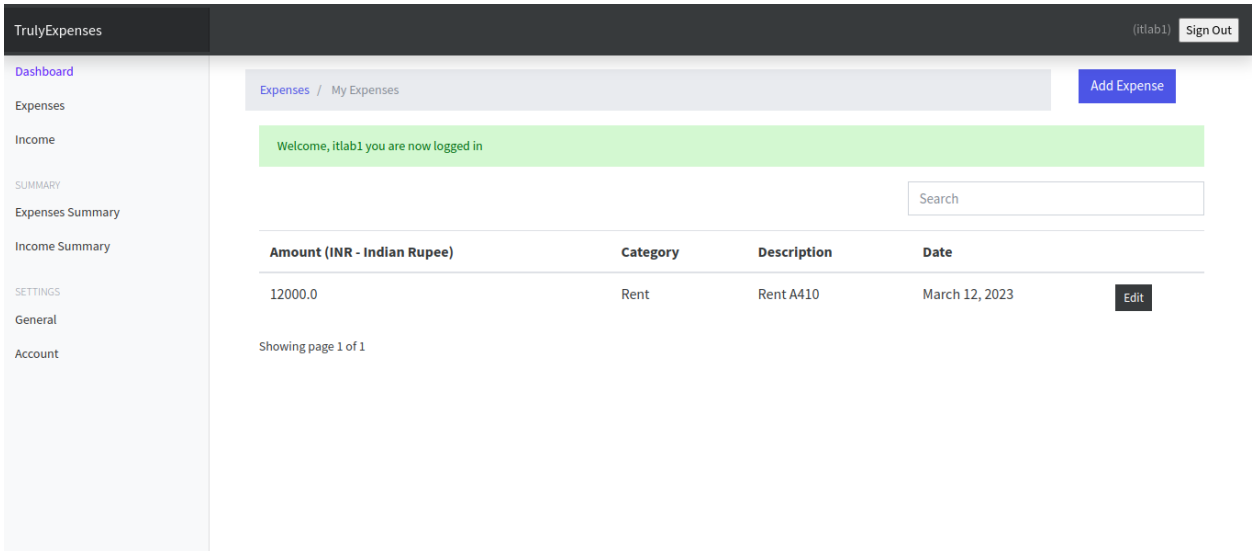


Add categories and expenses

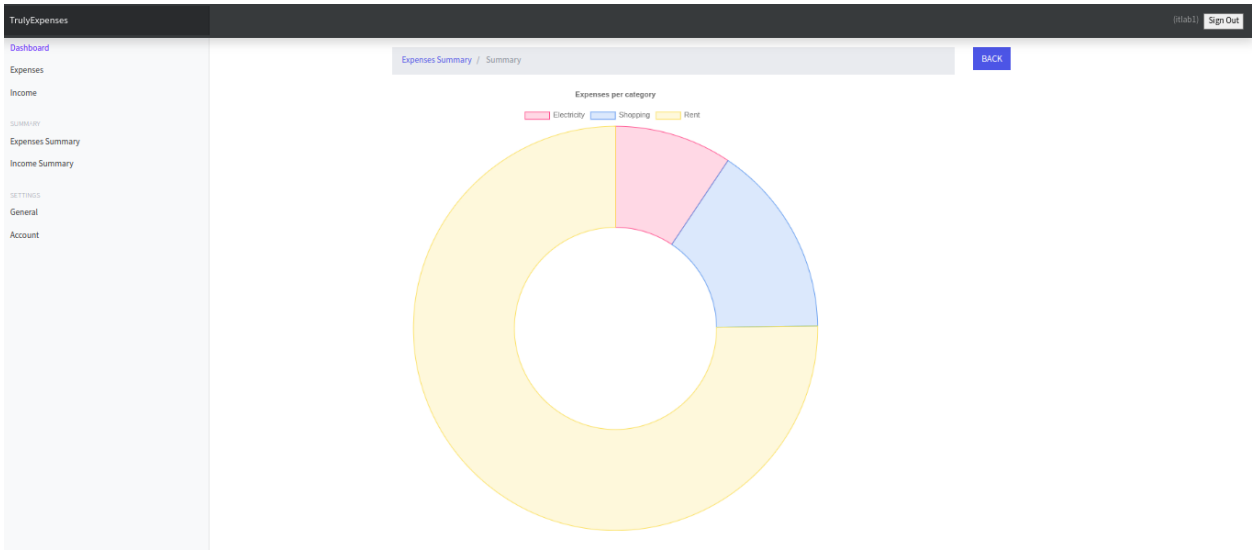




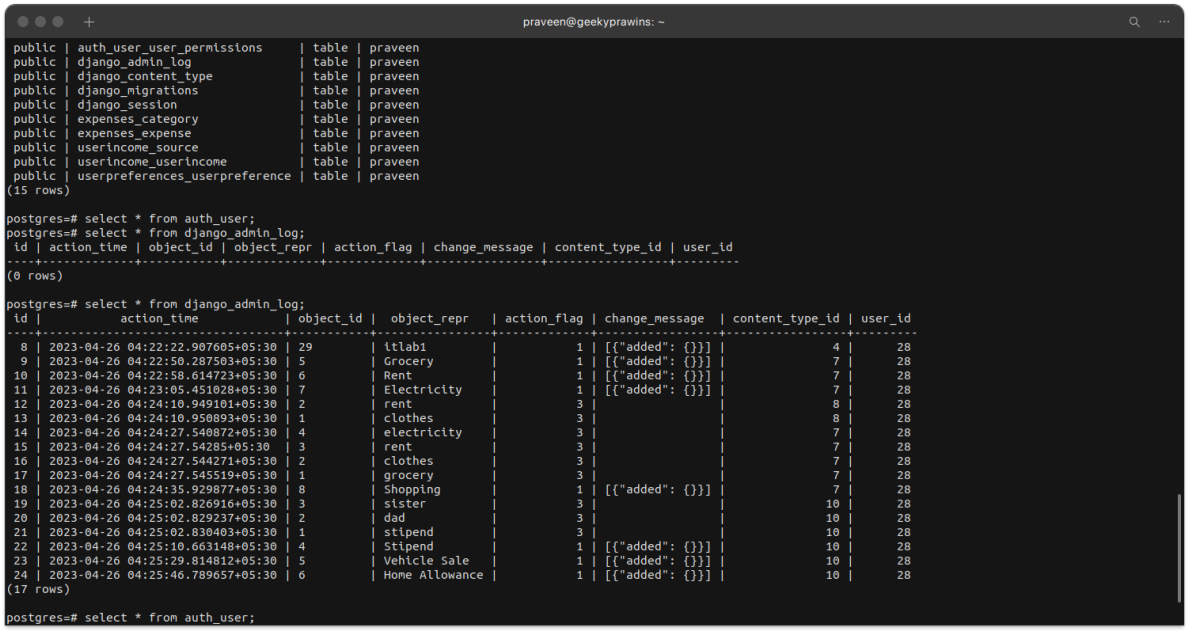
Add income sources



User dashboard



User expenses chart



Postgres Database Outputs

CONCLUSION

In conclusion, Trackify Me is a robust and user-friendly web application that provides users with an efficient and effective way to track their expenses and income. The use of Django and PostgreSQL makes the application scalable, secure, and reliable, making it a useful tool for personal finance management. With the addition of new features and advancements, the application has the potential to become even more useful and widely used.

LIMITATIONS & FUTURE WORK

Future Scope:

There are several future scopes and features that could be added to the Trackify Me project:

Mobile App: A mobile app version of the application can be developed to make it more accessible and convenient for users to input and track their expenses on the go.

Machine Learning: Machine learning algorithms can be used to analyze the user's spending habits and suggest ways to optimize their expenses, like recommending cheaper alternatives or identifying subscriptions that the user may not be using.

Automated Expense Categorization: The application can be enhanced to automatically categorize expenses based on the user's past transactions and machine learning algorithms.

Advanced Reporting: Advanced reporting features can be added to the application, such as graphs and charts, to provide users with a more visual representation of their expenses and help them better understand their spending patterns.

Integration with Financial Institutions: The application can be integrated with financial institutions like banks and credit card companies to automatically import transaction data, reducing the need for manual data entry.

Expense Reminders: The application can be enhanced to send expense reminders to users when they have not inputted any expenses for a specific period of time.

Customizable Dashboard: The application can be enhanced to provide users with a customizable dashboard, where users can add widgets and customize the layout to fit their needs.

Goal Setting: The application can be enhanced to allow users to set savings goals and provide suggestions on how to achieve those goals.

Bill Payment Integration: The application can be integrated with bill payment services to allow users to pay their bills directly from the application.

These are just a few of the many future scopes and features that can be added to the **Trackify Me** project to improve its functionality and user experience.

Limitations:

While the implementation of **Trackify Me** was successful, there are some limitations to the application that may affect its functionality and usability.

Limited Third-Party Integration: The application currently does not support third-party integrations, such as with financial institutions, which limits its ability to automatically track expenses and income.

Limited Accessibility: The application is only accessible through a web browser, which may limit its usability for some users who prefer mobile applications or desktop applications.

Limited Customization: The application currently does not allow for much customization beyond basic category and budget creation, which may limit its usefulness for users with more complex financial tracking needs.

Limited Reporting: The application currently has limited reporting features, which may limit its usefulness for users who require more detailed financial reporting.

Limited Security Features: While the application was designed with security in mind, it may not have all the necessary security features to protect user data from potential threats.

Overall, while the implementation of **Trackify Me** is a step towards efficient expense tracking, there are some limitations that may need to be addressed to improve its functionality and usability for users.

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First and foremost, we would like to thank the Django web framework and PostgreSQL database for providing a solid foundation for building this application. Their ease of use and rich feature set allowed us to quickly build a powerful expense tracker.

We would also like to thank the open-source community for providing a wealth of resources and packages that we were able to use in this project. Their contributions and support were invaluable in making **Trackify Me** a reality.

We would like to extend our heartfelt gratitude to our professors who have played an instrumental role in the development of **Trackify Me**. Their valuable guidance and expert knowledge in the field of web development have helped us to build a robust and user-friendly expense tracker.