Development of a Web Application for the SenteSense Expense Tracking and management

Project Overview: The objective of this web application is to provide individuals with a platform to manage, track and plan for their personal finances and make better financial decisions leading to their financial development.

Scope of The SenteSense Web Application Report: The report will show the steps that where involved in the development of the SenteSense web application.

Requirements Analysis

Business Requirements: Users need to be able to properly login or sign up, track their own transactions, categorize expenses and receive notifications.

Technical Requirements: The application must be compatible with major browsers like Chrome and Firefox.

System Design

Architecture Overview: The web application uses a client-server architecture with a React front end, Express.js Backend and a MySQL database for the storage of user data like emails and passwords and their expense and transaction history.

UI/UX Design: The home page includes a user profile section and navigation bar.

Technology Stack

Frontend: React.js

Backend: Express.js, Node.js, MySQL

Development Process

Frontend Development: This was developed using React.js with multiple react libraries like ant design, chart.js, axios. The libraries helped to structure the components. Css styles were also added to bring out the components and also make them user friendly.

Backend Development process: The was developed using Express.js, Node.js with controllers and routes to manage the user data and transactions. The database was connected using a .env file and the thunder client Visual Studio code extension was used to test for the workability of the database, controllers and routes. MySQL was used for the storage of user data, expense and transactions.

Challenges and Solutions

Challenges:

- Some of the main challenges was connecting the back end to the database, continuous code failure and short time frame to finish the project.
- Several errors were brought due to libraries that weren't installed.
- Failure to connect the front end to the back end.

Solutions:

- Use of AI to debug code and provide suggestions on how connect the database. You tube videos dealing with the same problems. Trail and error and seeking guidance from more experienced web application developers.
- Installation of the different libraries that come as dependencies.

Conclusion

Summary of the project: The web application successfully allows users sign up, login in and track their finances making it a functional web application.

Future Improvements: Future versions should include better UI/UX design and integrations with bank APIs to automatically import transactions.

References

https://reactjs.org/docs/

https://nodejs.org/en/docs/