Summary: Personal Finance Management WebApp

In this project, user will be able to log their daily expenses and they can see the total spend, grouped by various dimensions (such as, categories, payment mode etc)
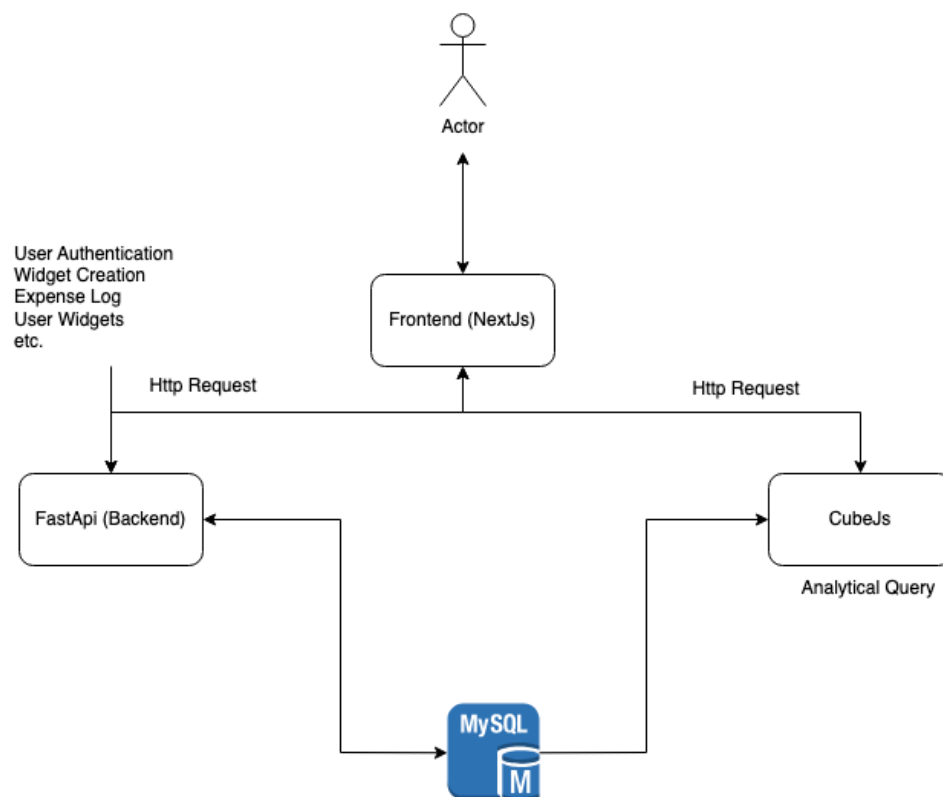
Overview of architecture:

Front-end: NextJs (ReactJs Framework)
Backend: FastApi (Python Framework)
Analytical Query: CubeJs

FlowChart (High Level)

Breakdown of phases of project (e.g. building backend e.g.):

Backend

1. FastApi application setup with SqlAlchemy and Alembic to generate migrations
2. Creating a command with Typer to seed the hardcoded dummy data for the given date-range
3. Creating the user login api
4. Creating the widget save api
5. Creating the widget delete api
6. Creating the fetch user widget api

FrontEnd

1. Setting-up the application layout
2. Creating the user login page
3. Integrating the login api
4. Creating the user dashboard page
5. Create the react-context for drawer
6. Creating the create widget form
7. Integrating the create widget api
8. Creating the user logout
9. Create the stats widget
10. Integrating the cube client to fetch the data for stats widget
11. Other type of widget like (Pie Chart, Bar Chart, not implemented)

CubeJs

1. Setting up the cubejs application with docker
2. Connecting the database with cubejs
3. Generating the data models
4. Editing the measures and dimensions in data model

Future Enhancement

- User Password Reset
- User Expense Add option
- More type of widgets like Pie Chart, Bar Chart etc
- Filters in Fidgets
- Date Range selection on Dashboard
- In Production - read replica of MySQL for cubejs to read data
- Reporting Options to the User
- Integration Apache Airflow to automatically generate and send reports
- Add caching
- etc