

PrePal

*AI-driven Conversational Grocery
Shopping Platform*

Midterm Presentation – Cloud
Computing Workshop

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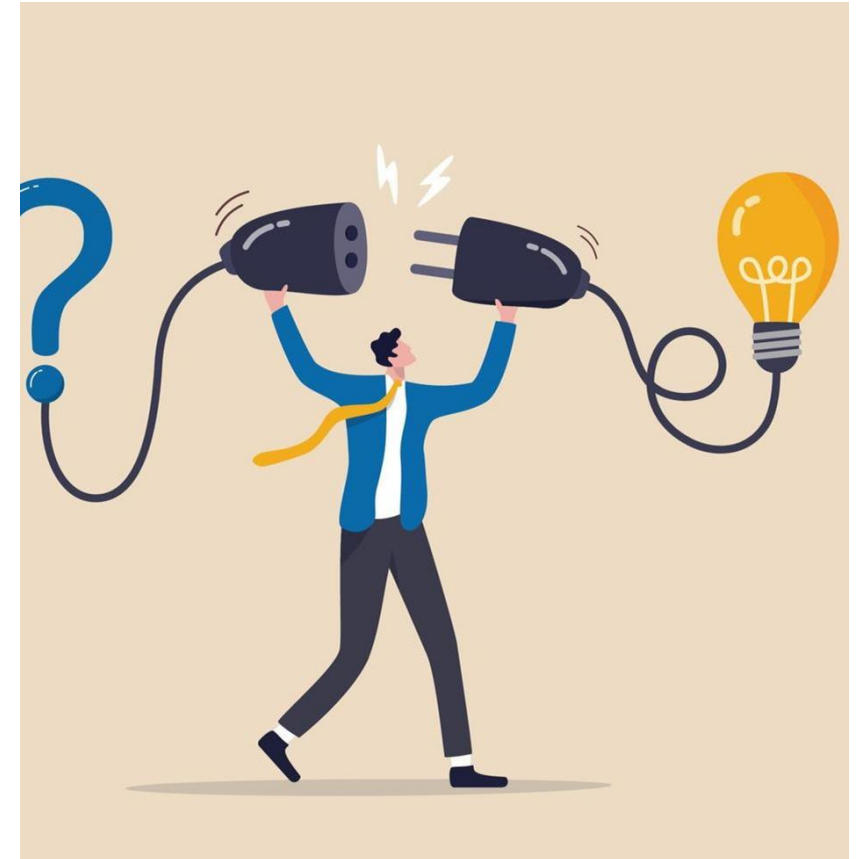
Problem Statement

- Traditional grocery shopping is inefficient and outdated.
- Manual item selection is time-consuming.
- Lack of integration between meal planning and ordering.
- Not accessible to people with disabilities or limited tech knowledge.



Our Solution

- AI-powered chat-based grocery shopping platform.
- Users describe needs via conversation (e.g., recipes, items).
- System builds shopping list and places order.
- Integrated with supermarkets (both local stores and large supermarkets) and delivery (Wolt).



Demo

Customer Flow

Start Chat → Send Message → AI Agent Processes → Product List Returned (Nearby Store) → Checkout

Store Inventory Flow

View Products → Filter/Search → Update / Add / Remove Products

Store Order Flow

View Incoming Orders → Approve or Reject Order

Store front: <https://master.d30twuvk5wgog5.amplifyapp.com>

Customer front: <https://master.d2zvlwwhqwts87.amplifyapp.com>

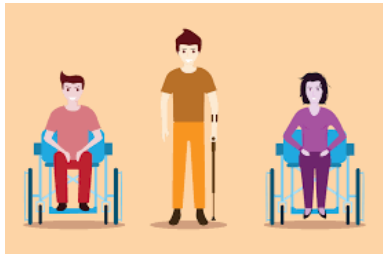
Innovation



Conversational AI – Uses OpenAI API for natural interaction.



Meal + Order Integration – From recipe to cart to delivery.



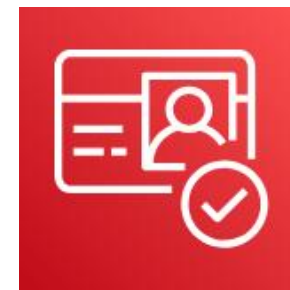
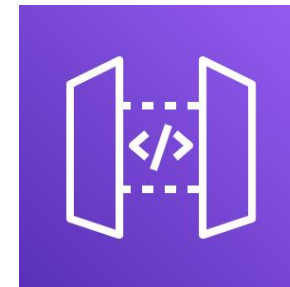
Accessibility Focus – Tailored for individuals with disabilities.



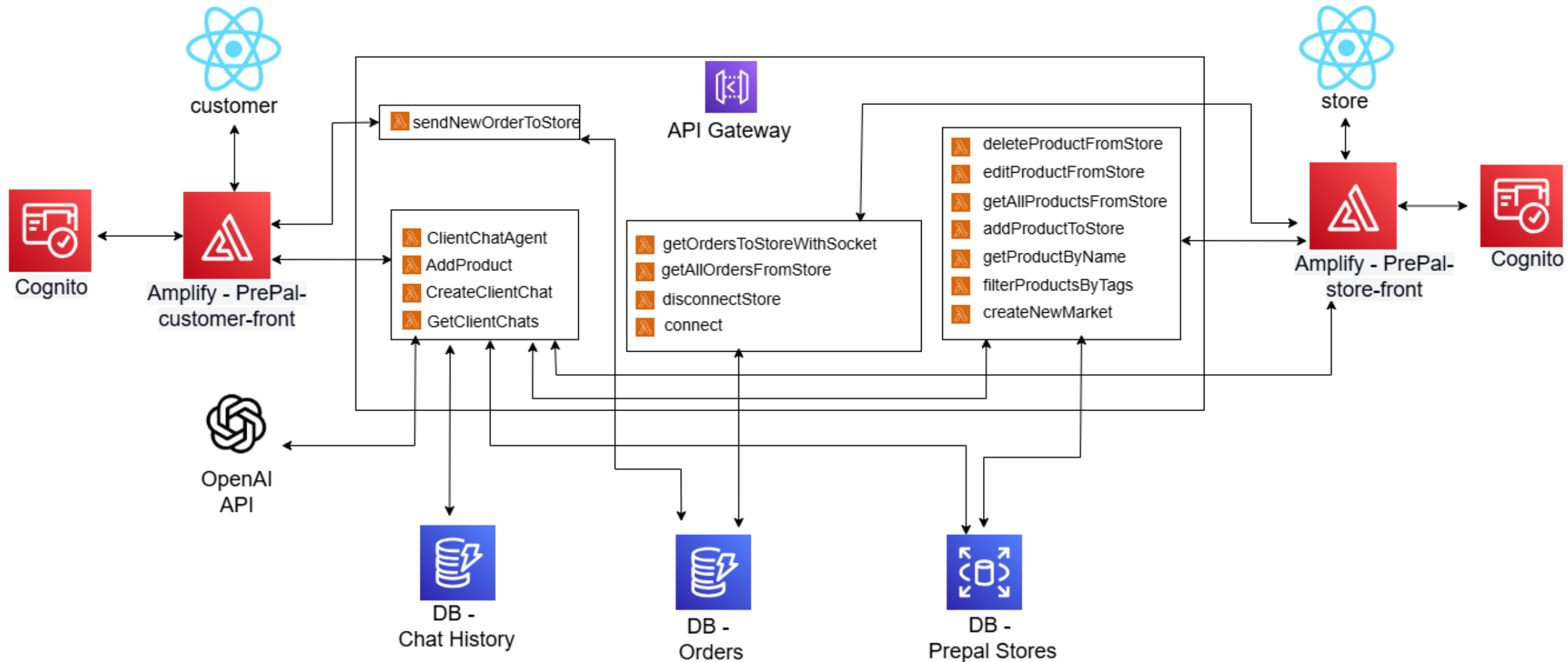
Location-Based Store Selection – Nearest store with availability.

AWS Tools We Use

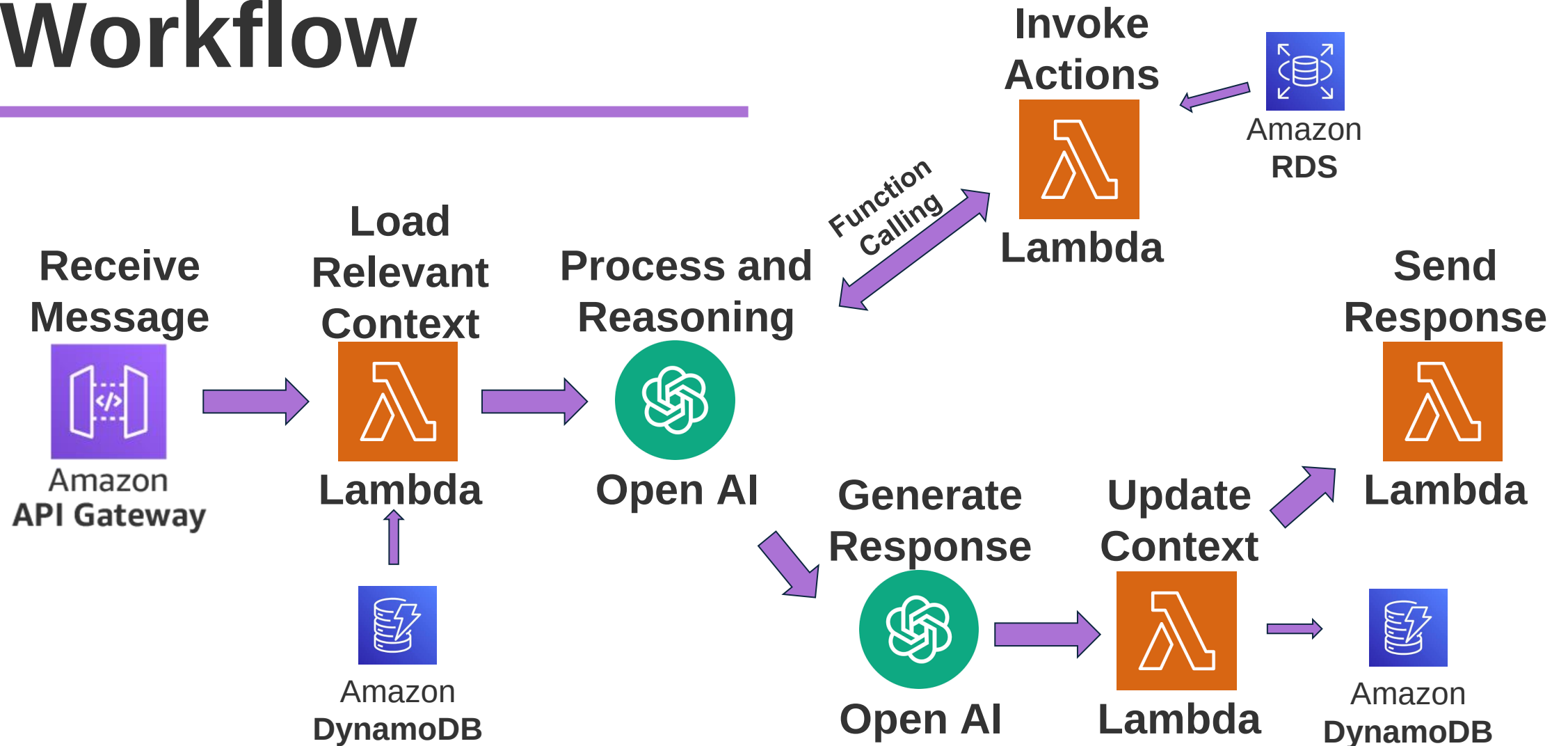
- **AWS Lambda** – Chat logic & DB operations.
- **Amazon API Gateway** – Connects frontend & backend.
- **Amazon DynamoDB** – Stores chats & active orders.
- **Amazon RDS (PostgreSQL)** – Stores structured data (stores, products, relations) used in chat-based product selection.
- **AWS Amplify** – Hosts frontend + backend integration.
- **Amazon Cognito** – Handles user sign-up & login.



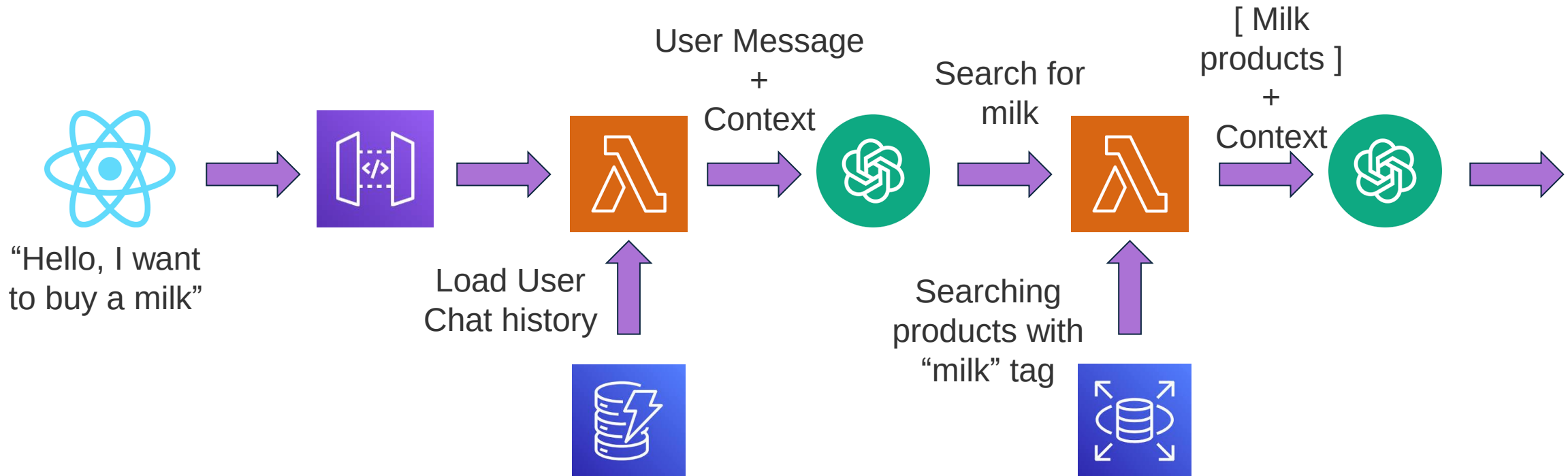
System Architecture



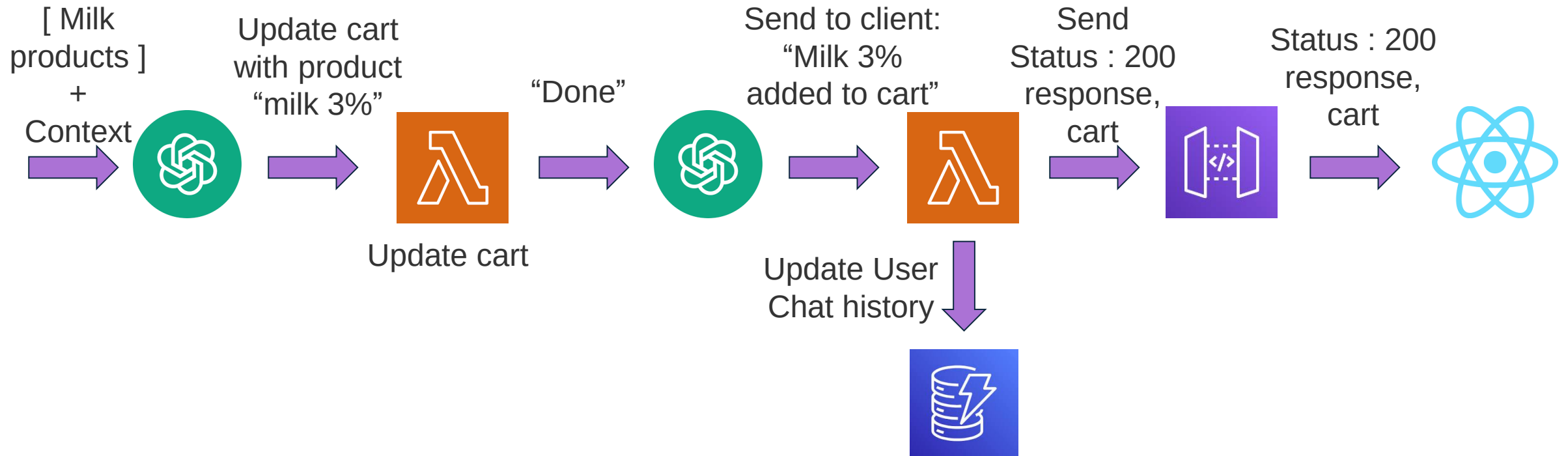
Chat Processing Workflow



Chat Processing Workflow - Demo



Chat Processing Workflow - Demo



What's Next?

- Payment system
- Delivery system via Wolt API
- Authentication and Authorization
- Enhance and expand the user interface

to be continued



Relevant Links

- PrePal website - <https://www.projects.mta.ac.il/projects/preppal>
- Github - <https://github.com/lilachKup/PrepPal.git>
- Github customer front (for amplify) - <https://github.com/lilachKup/PrePal-customer-front.git>
- Github store front (for amplify) - <https://github.com/lilachKup/PrePal-store-front.git>

Thank you for listening!