

MEX Assistant

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Problem Statement

The goal is to develop an intelligent, chat-based AI assistant that proactively provides merchant-partners with valuable insights, personalized guidance, and operational alerts. The solution should:

- **Provide real-time analytics and business insights**

- Automate timely delivery of sales and inventory reports
- Highlight critical issues and opportunities for merchant attention

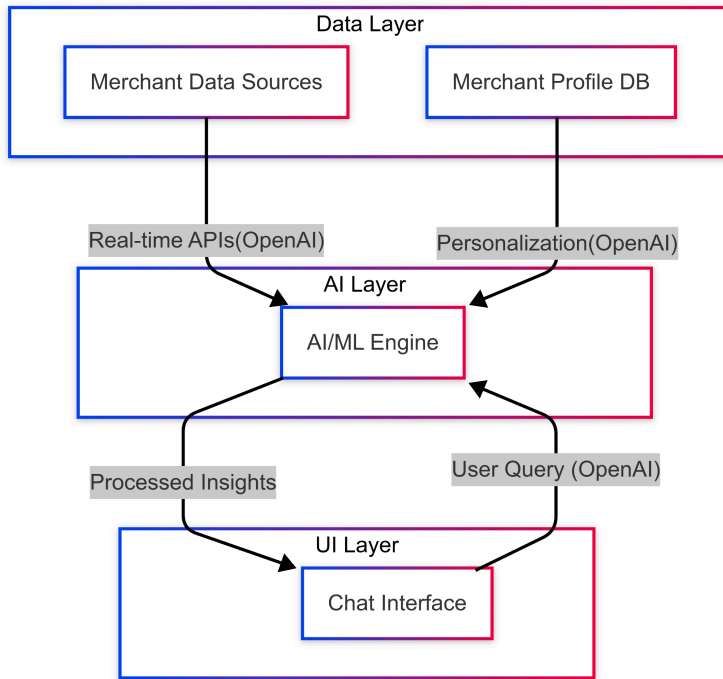
- **Deliver personalized, actionable recommendations**

- Cater specifically to merchant characteristics (type, region, size)
- Suggest improvements and identify growth opportunities

- **Support diverse communication needs**

- Manage multilingual, colloquial, and straightforward interactions
- Ensure easy-to-understand and practical dialogues that drive merchant engagement

1. Solution Architecture

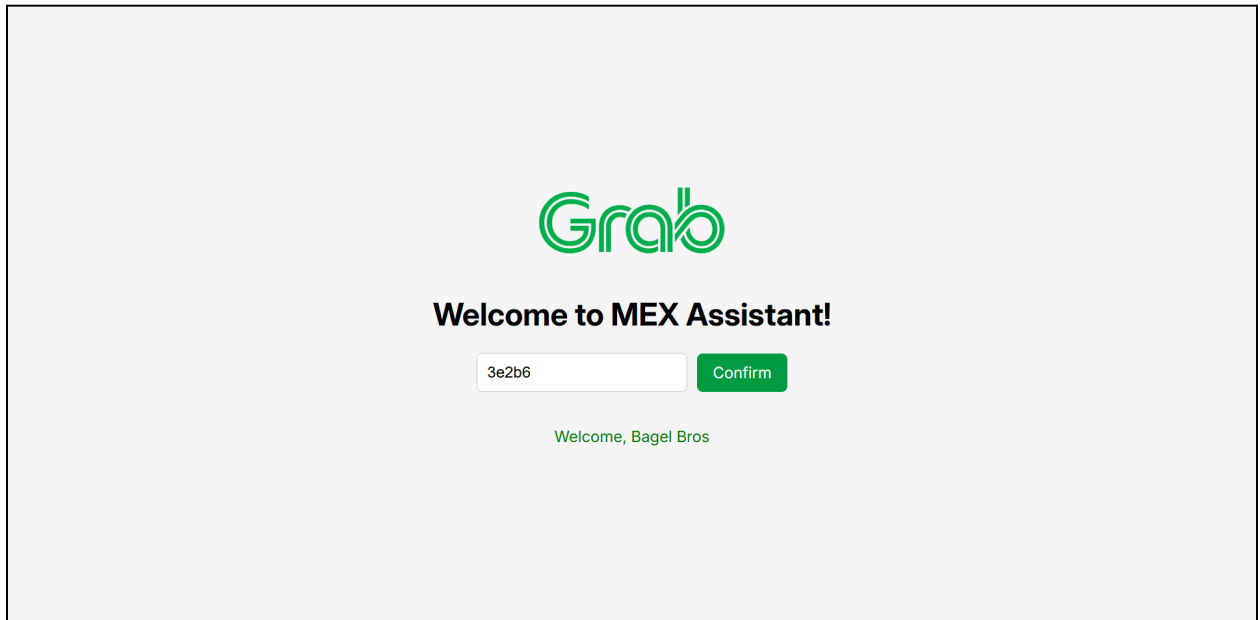


Prototype:

1. Login page. Users are prompted to enter their own merchant ID.

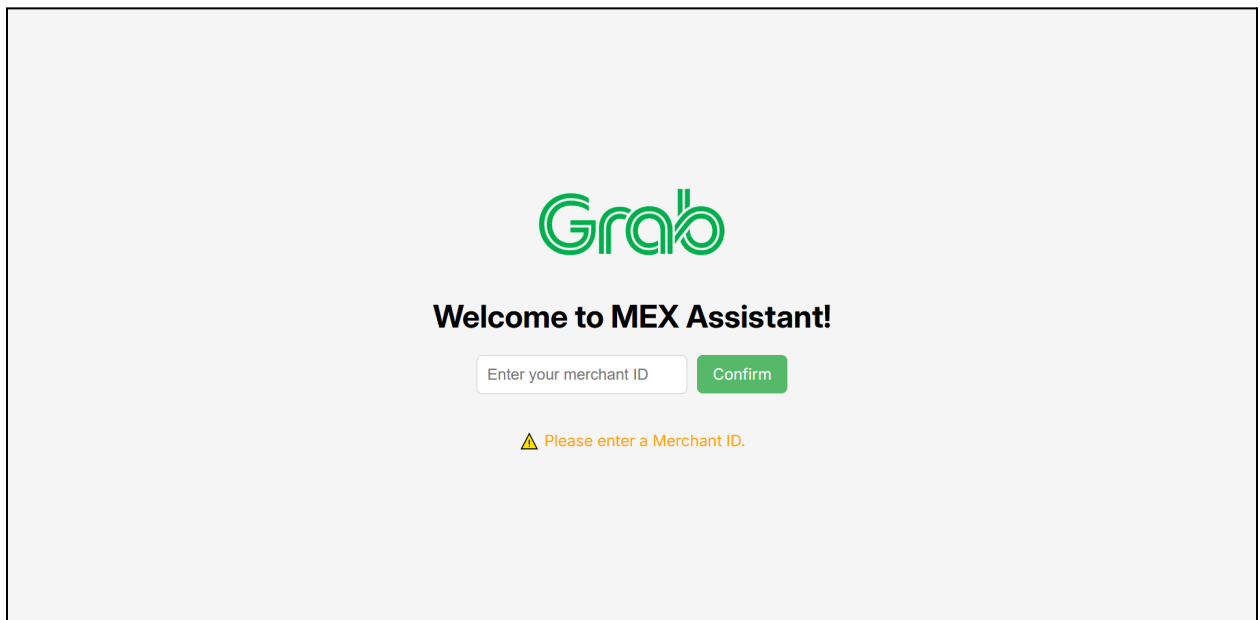
The image shows a prototype of a login page for the MEX Assistant. It features the Grab logo at the top, followed by the text "Welcome to MEX Assistant!". Below this, there is a text input field labeled "Enter your merchant ID" and a green "Confirm" button.

2. If the merchant ID entered is valid and exists in the database, the corresponding merchant name will be shown along with a Welcome message.



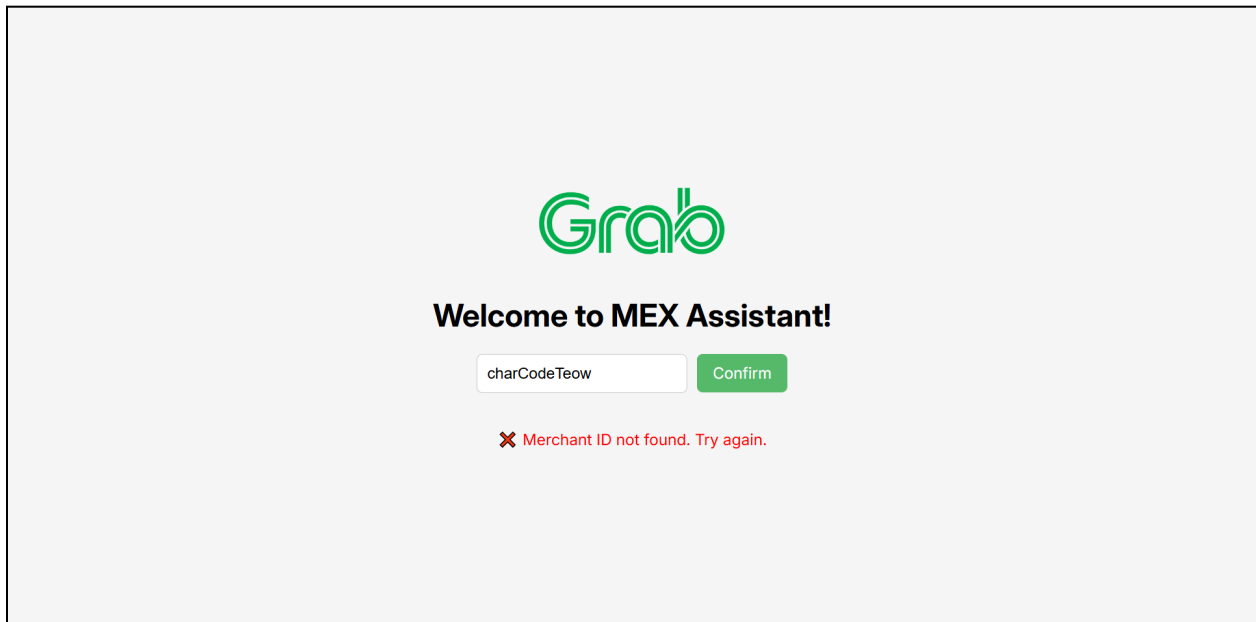
The screenshot shows the Grab MEX Assistant interface. At the top is the Grab logo in green. Below it, the text "Welcome to MEX Assistant!" is displayed in bold black font. Underneath, there is a white input field containing the text "3e2b6" and a green "Confirm" button. Below the input field, the text "Welcome, Bagel Bros" is displayed in green font.

3. If the Confirm button is clicked without entering merchant ID, a message will pop out to indicate the users to input the merchant ID.



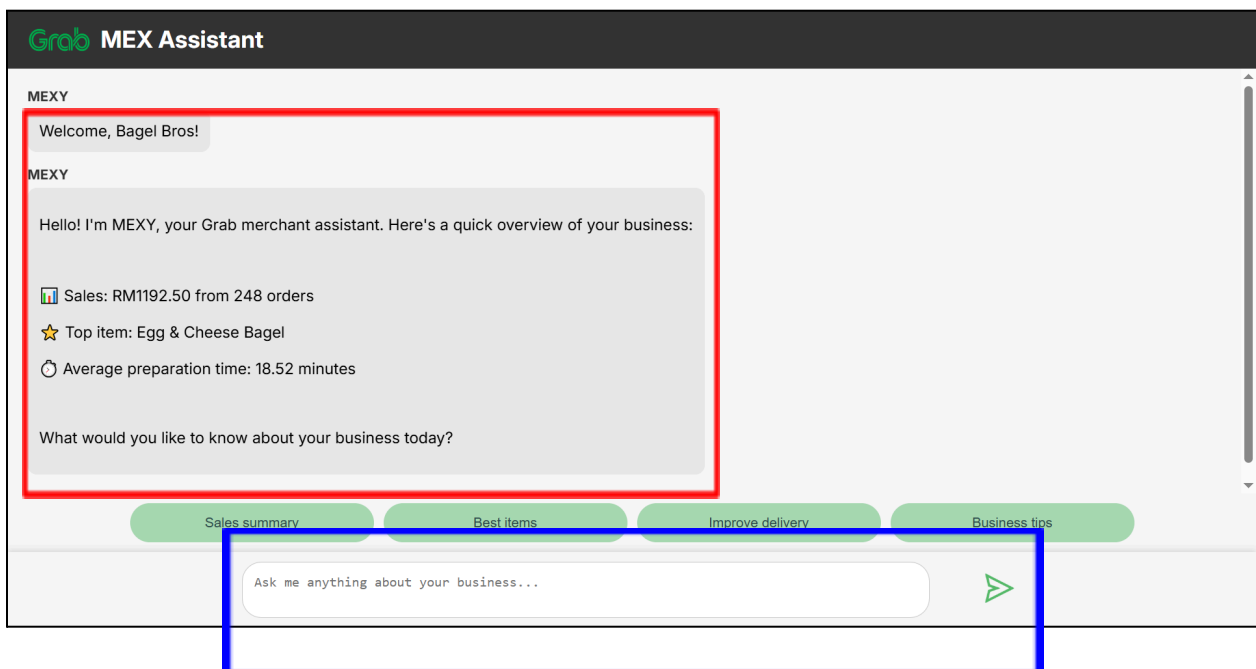
The screenshot shows the Grab MEX Assistant interface. At the top is the Grab logo in green. Below it, the text "Welcome to MEX Assistant!" is displayed in bold black font. Underneath, there is a white input field containing the text "Enter your merchant ID" and a green "Confirm" button. Below the input field, a yellow warning triangle icon is followed by the text "Please enter a Merchant ID." in orange font.

4. If the merchant ID entered is not valid or does not exist in the database, an error message will pop out.

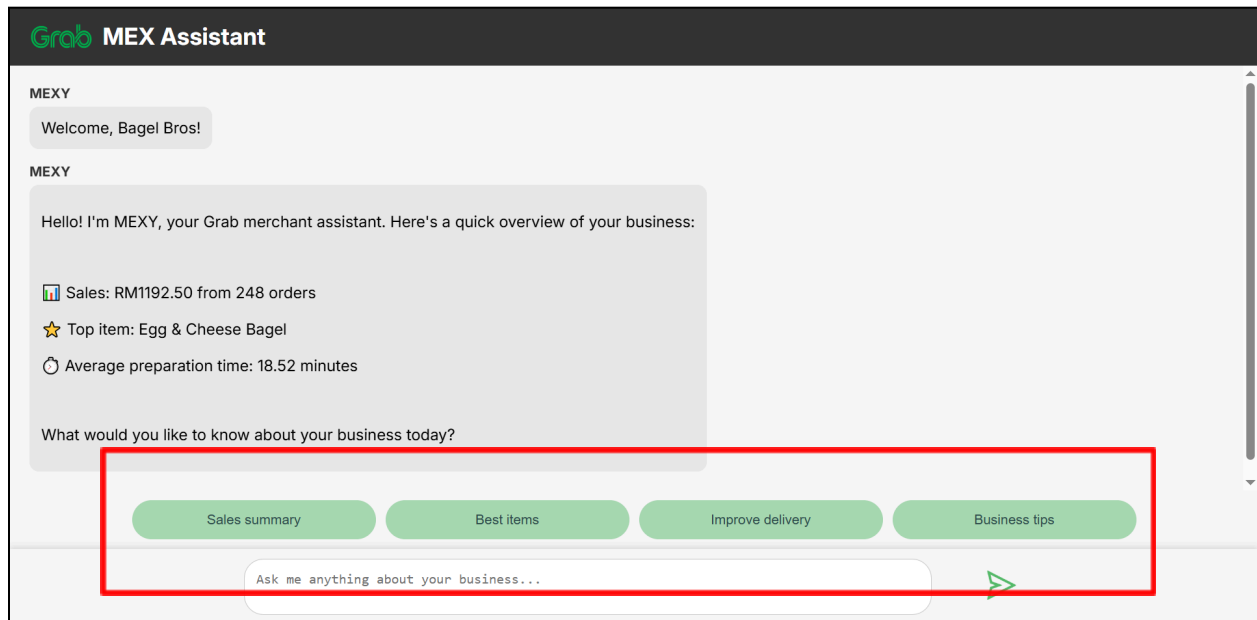


5. After a valid merchant ID is entered, the user will be directed to this page. This is a chatbox between a merchant and the Grab merchant assistant. There is a **default message** shown without users' input, which provides an overview of the business metrics clear at a glance.

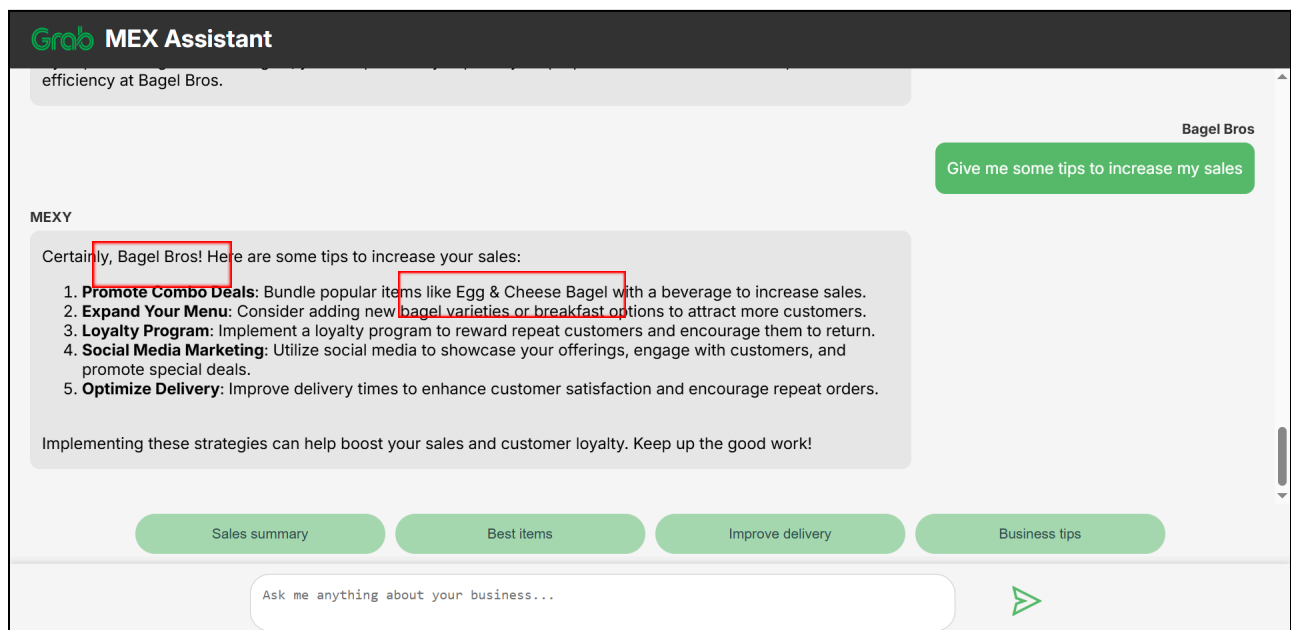
Users can type their query to interact with the bot.



6. Without typing out the query, users can also click on the quick prompt choices available to retrieve desired business data.



7. For example: After clicking the “Business tips” quick prompt, the merchant assistant will directly display possible business techniques that might be helpful to the merchant. The tips are generated based on the merchant profile and items sold.



2. Data Utilization

A. Data Sources

Our team has utilised datasets provided by Grab to generate trend insights and forecasts.

- **Merchant Profile Data** - merchant_id, merchant-name, join_date, city_id
- **Items Data** - item_id, cuisine_tag, item_name, item_price, merchant_id
- **Keywords** - keyword, view, menu, checkout, order
- **Transaction Items** - order_id, item_id, merchant_id
- **Transaction Data** - order_id, order_time, driver_arrival_time, driver_pickup_time, delivery_time, order_value, eater_id, merchant_id

B. Data Processing

We utilized the datasets provided by Grab and merged them into a new, insightful dataset named updated_order. This dataset includes the following columns: order_id, order_time, order_value, item_id, item_name, item_price, merchant_id, driver_arrival_time, driver_pickup_time, delivery_time, cuisine_tag, and total_order_value. Using this consolidated dataset, we proceeded to generate meaningful insights.

- **Trend Analysis Algorithms:** Identify current sales trends and patterns.
- **Overview** of latest items sold and transactions successfully made.

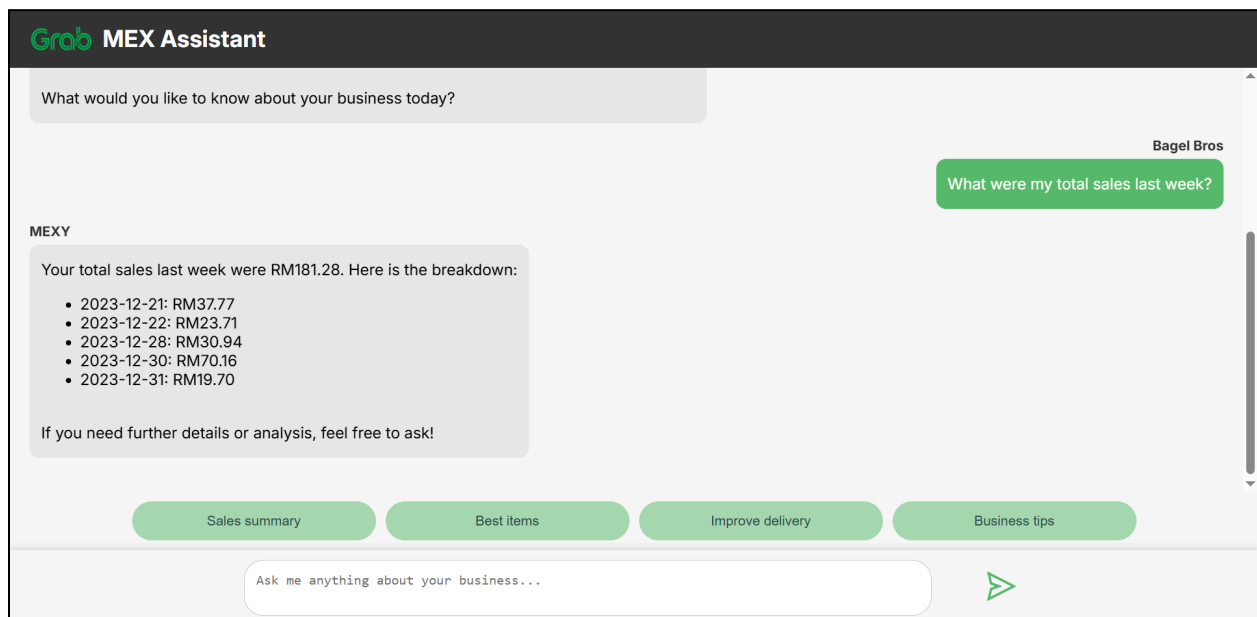
3. Personalization Strategies

A. Personalization Using OpenAI API

- Integrated **OpenAI API** for natural language generation.
- Prompts are dynamically built using merchant data provided by Grab.
- Generates **context-aware, personalized responses** based on the merchants' input.
- Adapts tone and language based on merchant profile and digital literacy.
- Delivers **relevant insights and guidance** tailored to each merchant.
- Supports natural, multilingual interactions for diverse merchants, meeting the requirement to fulfill Southeast Asia merchants' needs.

Example:

Language changes according to the merchant's input.



Grob MEX Assistant

Your total sales last week were RM181.28. Here is the breakdown:

- 2023-12-21: RM37.77
- 2023-12-22: RM23.71
- 2023-12-28: RM30.94
- 2023-12-30: RM70.16
- 2023-12-31: RM19.70

If you need further details or analysis, feel free to ask!

Bagel Bros

Apakah top selling item yang dijual di Bagel Bros?

MEXY

Top selling item yang dijual di Bagel Bros adalah Egg & Cheese Bagel dengan total penjualan sebanyak 118 unit dan pendapatan sebesar RM590.00.

Sales summary

Best items

Improve delivery

Business tips

Ask me anything about your business...



Grob MEX Assistant

Top selling item yang dijual di Bagel Bros adalah Egg & Cheese Bagel dengan total penjualan sebanyak 118 unit dan pendapatan sebesar RM590.00.

Bagel Bros

你认为我可以推出什么新产品?

MEXY

您好! 根据您的销售数据和订单情况, 我建议您考虑推出以下新产品:

1. 早餐套餐: 结合热销的Egg & Cheese Bagel, 搭配一杯Freshly Brewed Coffee, 打造吸引顾客的早餐组合套餐。
2. 季节限定口味: 尝试推出季节限定口味的Bagel或Coffee, 如秋季南瓜口味或夏季水果口味, 吸引顾客尝鲜购买。
3. 增加素食选择: 考虑推出更多的素食Bagel, 以满足不吃肉类食品的顾客需求。

希望这些建议能帮助您拓展产品线, 提升销售业绩! 如果您需要更多建议或信息, 请随时告诉我。

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