FOOD ORDER CHATBOT

The Food Order Chatbot is a conversational agent designed to assist users in placing and managing food orders. The chatbot is integrated with the Dialogflow platform and utilizes FastAPI for handling webhook requests, MySQL for database operations, and a basic web interface.

Key Components:

1. FastAPI (main.py)

- ***Description:*** FastAPI is used to handle incoming webhook requests from Dialogflow.
- ***Role in Project:*** It facilitates communication between the chatbot and the external platform.

2. Dialogflow Integration (main.py)

- ***Description:*** Dialogflow is integrated to process user queries, extract intent and parameters.
- ***Role in Project:*** It enables natural language understanding and determines the user's intent.

3. Intent Handlers (main.py)

- ***Description:*** Functions like add_to_order, remove_from_order, complete_order, and track_order handle specific user intents.
- ***Role in Project:*** These functions manage the logic for adding items to an order, removing items, completing an order, and tracking the order status.

4. Database Helper (db_helper.py)

- ***Description:*** Connects to a MySQL database and performs operations related to storing order details and tracking.
- ***Role in Project:*** Handles the backend storage and retrieval of order information.

5. Generic Helper (generic_helper.py)

- ***Description:*** Contains utility functions for extracting session IDs and formatting strings.
- ***Role in Project:*** Provides general-purpose functions used across different components.

6. Web Interface (home.html)

- ***Description:*** Simple HTML page providing information about the restaurant, menu, location, and contact details.
- ***Role in Project:*** Serves as a basic interface for users and includes an embedded Dialogflow chat widget.

Work Flow:

1. ***User Interaction:***
   → Users interact with the chatbot by providing queries related to ordering food.
2. ***Intent Recognition:***
   → Dialogflow processes user queries, identifies intents, and extracts relevant parameters.
3. ***Intent Handling:***
   → The appropriate intent handler is invoked based on the recognized intent, managing actions like adding items to the order, removing items, completing orders, or tracking orders.
4. ***Database Operations:***
   → The chatbot interacts with the MySQL database through the db_helper module to store and retrieve order details.
5. ***Response Generation:***
   → The chatbot generates responses, including order updates, confirmation messages, and order tracking information.
6. ***Web Interface:***
   → Users can access information about the restaurant, view the menu, check the location, and contact the restaurant via the embedded chat widget on the website.