



# The Superior University, Lahore

## Assignment-I (Fall 2023)

Course Title:	Programming for AI				Course Code:	CAI601410	Credit Hours:	4
Instructor:	Prof. Rasikh Ali				Programme Name:	BSDS		
Semester:	4 <sup>th</sup>	Batch:	F23	Section:	BSDSM-4A	Date:	1 <sup>st</sup> February, 2025	
Time Allowed:					Maximum Marks:			
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Lab-Task 12								
1: Restaurant Chatbot QNA								

## Task 1

### RestaurantBot QNA

### Introduction

The **RestaurantBot Chat App** is a user-friendly chatbot designed to help customers interact with a restaurant easily. Users can ask questions like viewing the menu, booking a table, or getting restaurant details. The bot replies instantly, making the experience smooth and interactive.

### Technologies Used

- **Python** (Flask Framework)
- **HTML / CSS**
- **Natural Language Processing** (Simple matching or model-based reply)

### Features

- **Simple User Interface** with chat layout.
- **Instant Responses** from the RestaurantBot.
- **Timestamp** for each message.
- **Different Message Colors** for user and bot.
- **Responsive Design** for mobile and desktop.
- **Fallback Replies** if bot doesn't understand.

- **Auto-Scroll** for continuous conversation flow.

## How It Works

1. User types a query in the input field.
2. The chatbot (RestaurantBot) processes the query.
3. Bot sends an appropriate response back.
4. Chat conversation keeps updating dynamically.
5. Users can continue chatting endlessly with smooth flow.

## System Requirements

- Python 3.8 or higher
- Flask (pip install flask)
- Basic front-end libraries (HTML/CSS/JS)
- Browser (Chrome, Firefox, Edge, etc.)

## Installation & Running the App

1. Clone or download the project files.
2. Navigate to the project folder in Terminal/Command Prompt.
3. Install the required Python packages:

```
pip install -r requirements.txt
```

4. Run the Flask application:

```
python app.py
```

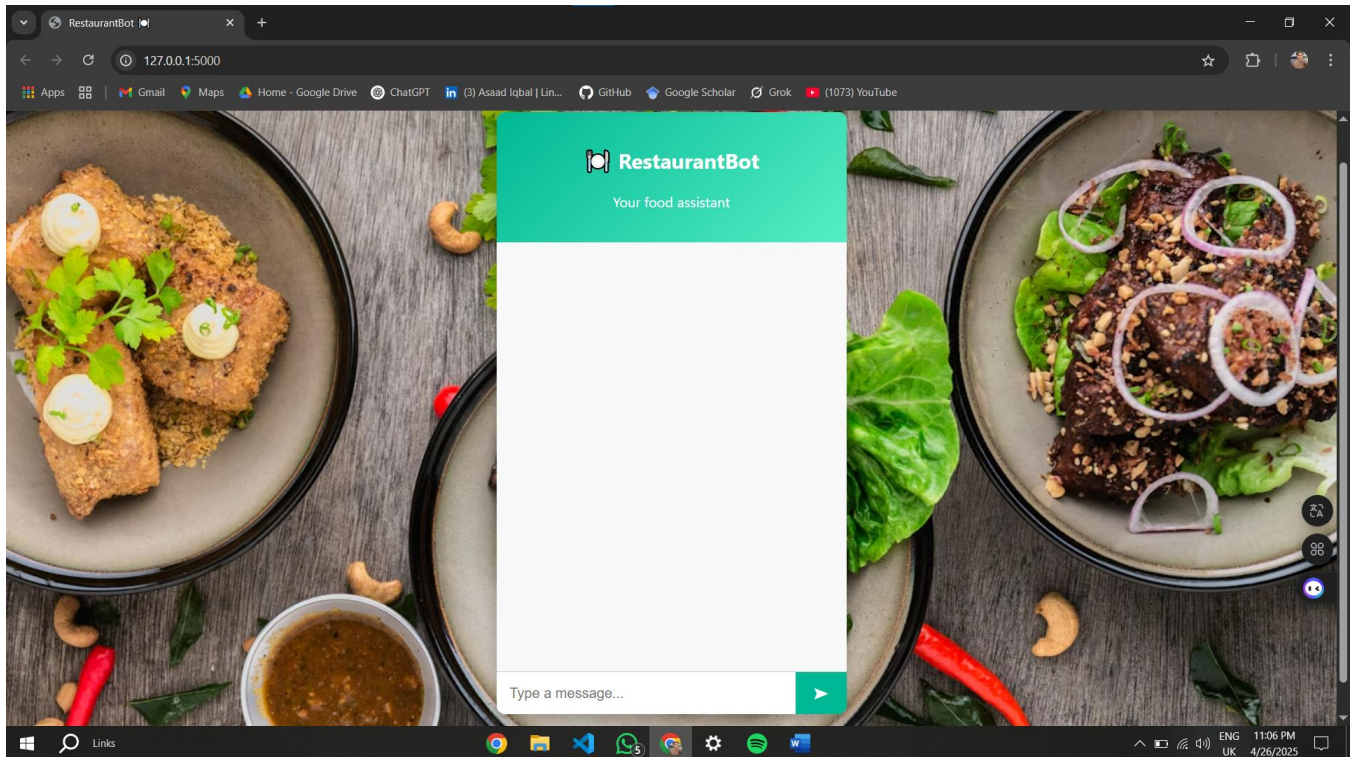
5. Open the browser and go to:

```
http://127.0.0.1:5000/
```

## App Screenshots and Highlights

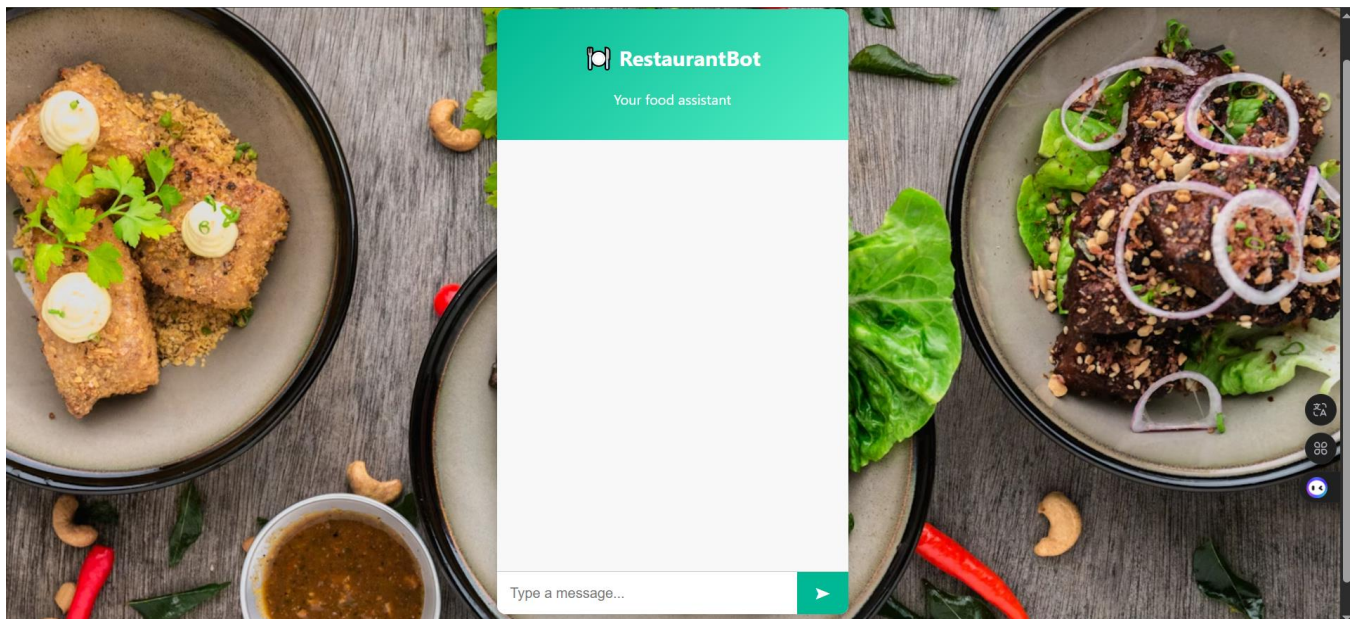
### 1. Landing Page View

- Shows the clean chatbot interface.
- Beautiful background with a neat chat window.
- Heading like "**RestaurantBot**" at the top with stylish font.



## 2. Initial Chat Screen

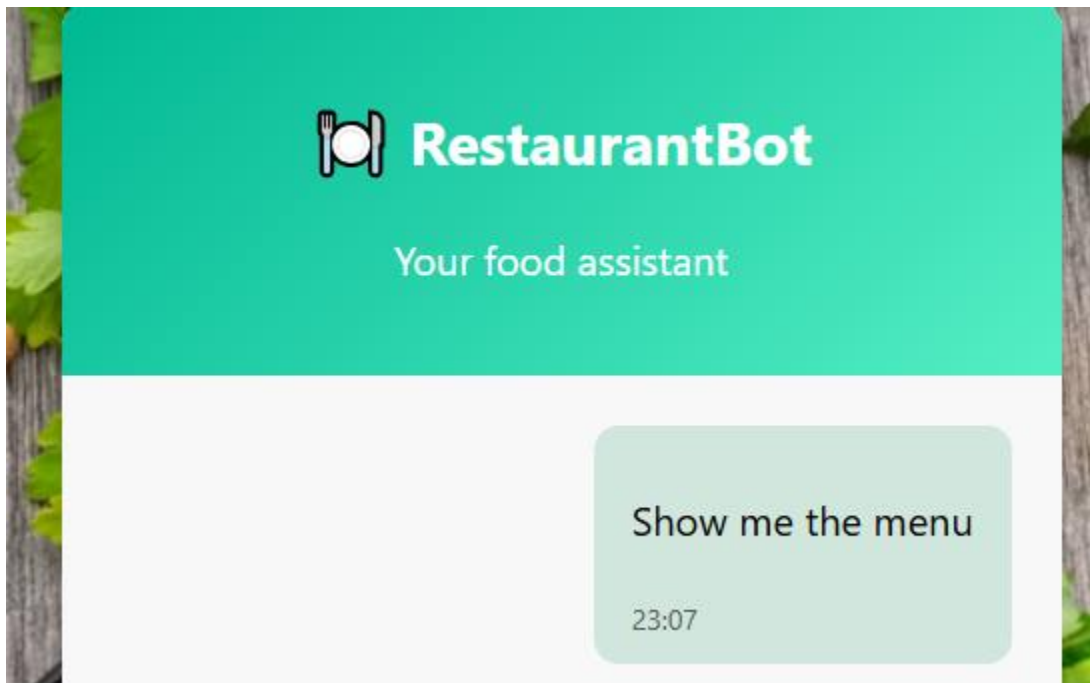
- Empty chatbox inviting the user to type a message.
- Input field at the bottom with a "Send" button.



## 3. User Sending a Query

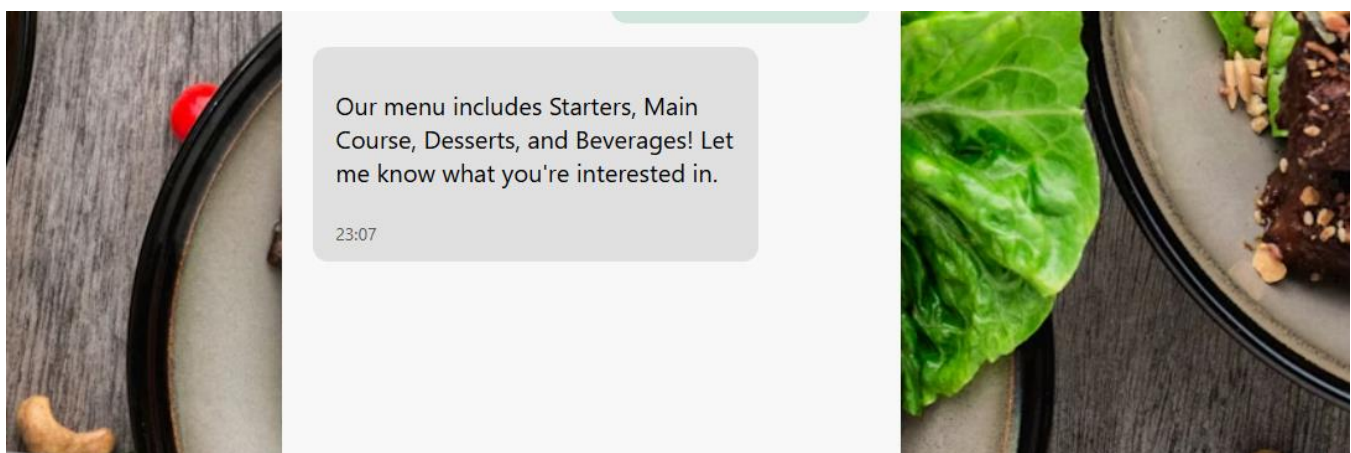
- User types something like:  
"Show me the menu"

- Message bubble appears on the **right side** (user side).
- Shows **timestamp** below the message.



#### 4. Bot Reply

- Bot responds instantly, e.g.:  
"Our menu includes Starters, Main Course, Desserts, and Beverages!"
- Message bubble appears on the **left side** (bot side).
- Bot replies are clearly distinguished by background color.



#### 5. Ongoing Conversation

- Chat history grows with alternating user and bot messages.
- Auto-scroll to the latest message.



- Smooth transition between questions and responses.

