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Title : Chatbot Documentation

1. Introduction

This chatbot is designed to provide financial information based on predefined queries related to specific companies, fiscal years, and financial metrics.

2. Overview

The chatbot is designed to provide financial information based on predefined queries related to specific companies, fiscal years, and financial metrics. It uses a simple keyword parsing mechanism to understand user queries and retrieves relevant data from a CSV file containing financial metrics for various companies.

3. How it Works

Users can enter natural language queries to ask for specific financial metrics, and the chatbot responds with the requested data.
The chatbot is designed to identify key information from user queries, such as the company name, fiscal year, and the specific financial metric the user is interested in (e.g., revenue, assets, or income). Based on this extracted information, the chatbot generates an appropriate response

4. Testing the Chatbot

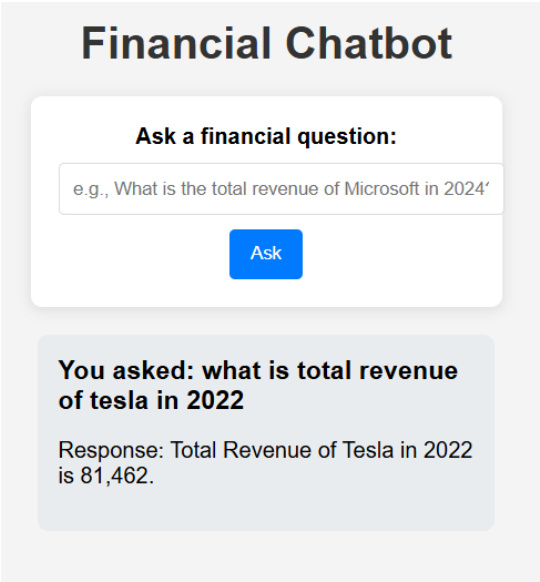

Fig: User query and chatbot response

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The chatbot can respond to queries such as:

Query: what is **total assets** of **tesla** in **2022**?
Response: **Total Assets** of **Tesla** in **2022** is 82,338.

Query: what is **total liabilities** of **Microsoft** in **2022?**
Response: **Total Liabilities** of **Microsoft** in **2022** is 1,98,298.

Query: what is **cash flow from operating activities** in **2022** of **Apple**?
Response: **Cash Flow from Operating Activities** of **Apple** in **2022** is 1,22,151.

5. Limitations

- **Keyword Sensitivity**: The chatbot is sensitive to the phrasing of queries. Users must include specific keywords for it to understand the intent correctly (e.g., "total revenue").
- **Company Names**: The chatbot only recognizes company names exactly as they appear in the CSV. Variations in spelling or abbreviation may lead to failure in retrieving data.
- **Year Format**: The year must be a four-digit number; otherwise, the chatbot will not recognize it as valid input
- **Incomplete Data**: If the requested financial data is not available in the CSV for the specified year or company, the chatbot will return a generic error message
- **Single Query Limitation**: The chatbot is designed to process queries that pertain to only one company and one fiscal year; it cannot address complex queries that involve multiple companies or aggregate data.
- **Query Restrictions**: The chatbot can only respond to requests concerning one company and one year at a time, and it does not support complex queries that require data aggregation or multiple companies.
- **Limited Query Scope**: The chatbot only supports queries for a single company and a single year at a time; it does not handle complex or aggregate queries involving multiple companies or years.

6. Conclusions

Overall, the chatbot functions well for predefined queries, but further enhancements could improve its flexibility and user-friendliness.