Introduction to Robotic Process Automation

AI MULTI PROMPTER BOT

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Abstract

The AI Multi-Prompter Bot leverages RPA to automate the aggregation of responses from multiple AI platforms, including **ChatGPT, Claude, and Gemini.** It streamlines workflows by using web automation, processes responses into structured formats, and exports data to **CSV or Excel.** This solution enhances efficiency, reduces manual effort, and supports scalable AI-driven workflows.
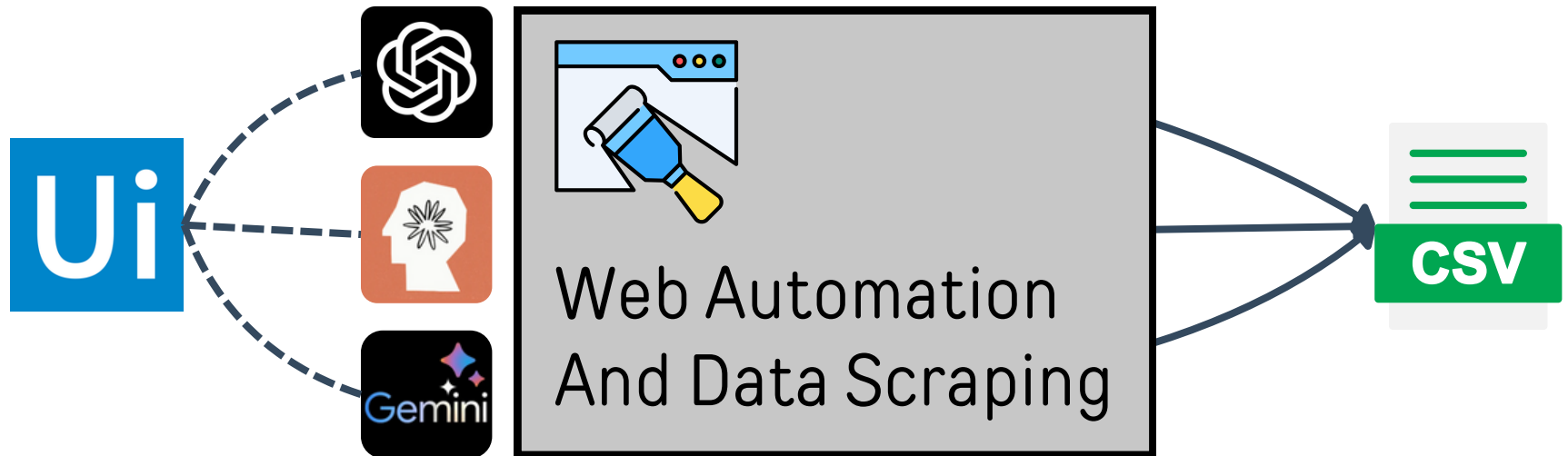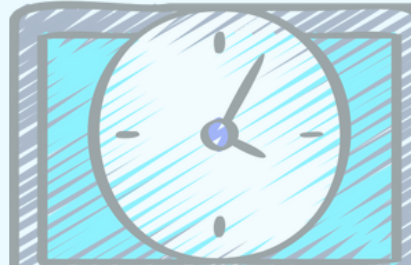
Need for the Proposed System

Centralized AI Insights

Current systems rely on **manual interaction with individual AI platforms, limiting efficiency**. The proposed system provides a centralized solution, **consolidating responses from multiple AI platforms into one interface.**

Providing structured, **multi-perspective AI** responses helps users make more informed decisions leveraging the **strengths of various** AI models effectively.
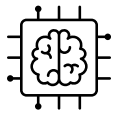
Time Saving Automation

Manually querying multiple AI models and organizing their responses is **time-consuming. Automating this process reduces effort** and ensures faster data aggregation.

Unified Workflow

Error Reduction

Scalable Design

Enhanced Decision Making

Advantages of the Proposed System

The AI Multi-Prompter Bot offers unparalleled advantages, including automation of **AI response aggregation, enhanced accuracy, and real-time efficiency.** With a user-friendly interface, structured outputs, and scalability, it reduces manual effort while ensuring seamless, secure, and cost-effective workflows.

Centralized AI Management
Unified access to multiple AI platforms
Reduced need for manual switching
Streamlined workflows

Enhanced Efficiency
Significant time savings through automation
Organized responses in structured formats
Faster data processing and task completion

Better Decision-Making
Structured data for insightful analysis
Real-time processing for quick responses
Improved workflow transparency

Scalable and Future-Ready
Integration-ready design for new AI platforms
Support for additional export formats
Adaptable to evolving organizational needs

Literature Survey

Downey et al., 2021.

Advantages:

- Enhanced Efficiency: RPA automates routine tasks while AI models generate contextually relevant responses, reducing the need for human intervention and speeding up processes (**Downey et al., 2021**).

Disadvantages:

- Error Handling: RPA systems may face difficulties in managing AI-generated errors, requiring complex workflows to correct or escalate issues effectively (**Downey et al., 2021**).

Sharma & Choudhary, 2023

Advantages:

- Scalability: These systems can scale easily to accommodate high volumes of user interactions, enabling businesses to handle large numbers of requests without increasing workforce size (**Sharma & Choudhary, 2023**).

Disadvantages:

- Limited by AI Model Performance: The effectiveness of the system is directly tied to the performance of the integrated AI models, which may generate incorrect or irrelevant responses (**Kumar & Sharma, 2022**).

Main Objective

The main objective of the proposed system is to **centralize interactions with multiple AI platforms, automating the process and reducing manual intervention**. This system aims to streamline workflows, improve accuracy, and enhance **decision-making by organizing AI-generated data into structured formats** for easier analysis and processing. By minimizing human errors and optimizing data handling, the system ensures a **more efficient and reliable approach to AI-driven tasks,** with scalability for future integration and adaptability to changing requirements. Ultimately, it seeks to save time, reduce complexity, and deliver actionable insights for better business outcomes.
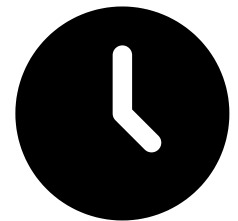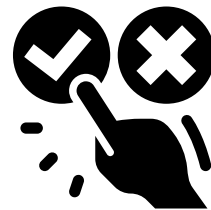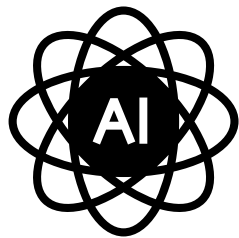
Architecture

- **User Interface:** User inputs prompts through a simple interface.
- **AI Model Integration:** Prompts are sent to multiple AI models (ChatGPT, Claude, Gemini).
- **Response Collection:** AI responses are gathered.
- **Data Processing:** Responses are formatted into a structured table (CSV/Excel).
- **Output Management:** Data is exported or saved for user access.
- **Efficient Workflow:** Streamlined, simple architecture with no added complexity.
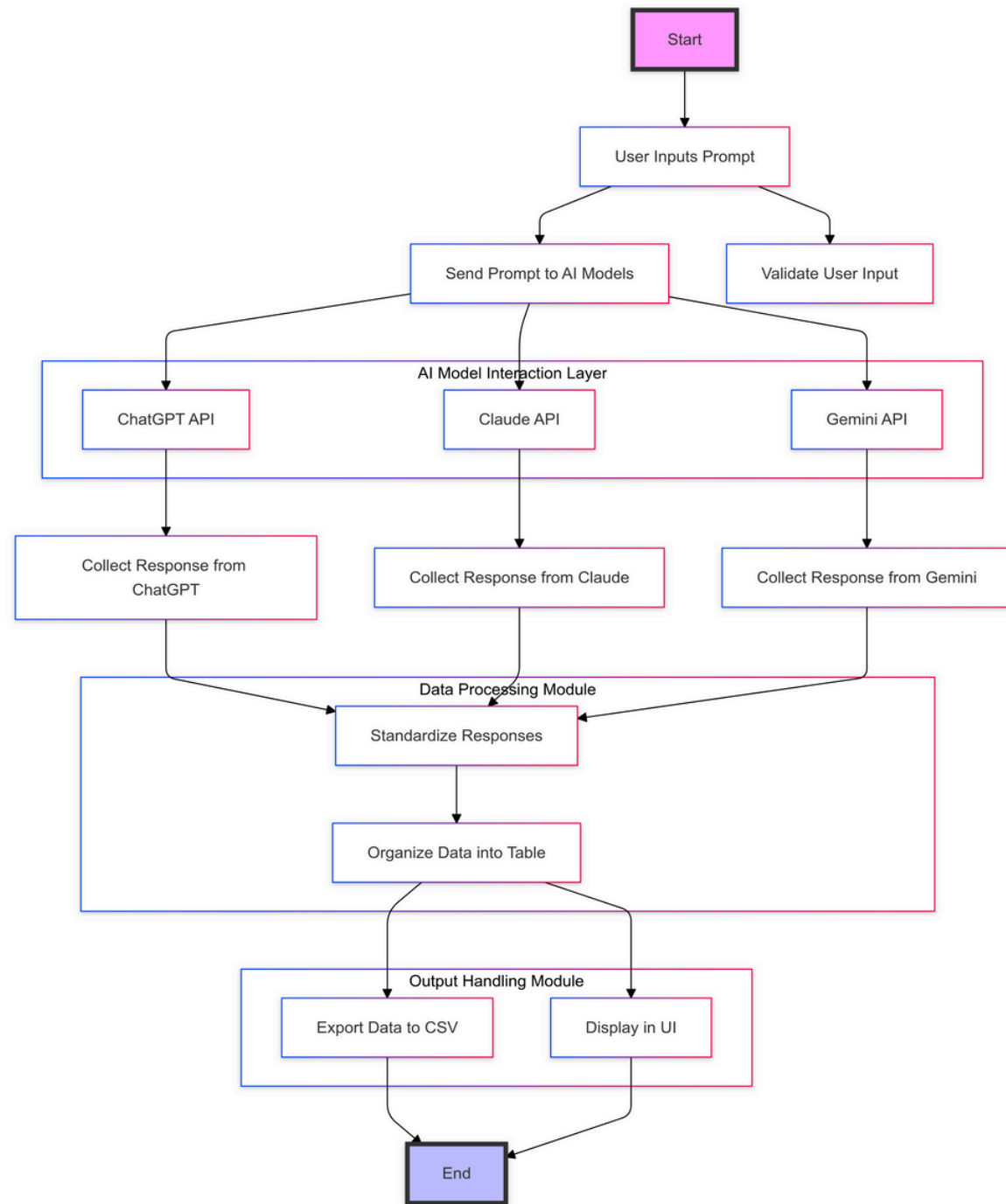
System Requirements

Hardware Requirements:

- Processor: Multi-core processor (i5 or above recommended)
- RAM: Minimum 4GB (16GB recommended for optimal performance)
- Storage: At least 100GB of free disk space (SSD preferred for faster performance)
- Network: Stable internet connection for accessing AI models
- Display: Standard resolution display (1920x1080 or higher)

Software Requirements:

- Operating System: Windows 10 or higher, macOS, or Linux
- AI Integration Platforms: Access to APIs for ChatGPT, Claude, Gemini (via OpenAI, Anthropic, Google)
- Programming Languages: Python 3.8 or above
- Office Software: Microsoft Excel or compatible software for file opening (for Excel export)

Functional Description

Module 1

AI Interaction and Data Retrieval
**Short Description:**
Module 1 handles the interaction with the AI models (ChatGPT, Claude, and Gemini) by sending user prompts, receiving responses, and storing the data. It automates the communication with the AI platforms, ensuring that each model is accessed in sequence, and responses are retrieved efficiently for further processing.

Module 2

Data Processing and Output
Short Description:
Module 2 is responsible for processing the responses from the AI models. It formats the data into structured tables, performs any necessary transformations, and then exports the results to CSV or Excel formats for user access. This module ensures that the data is easy to manipulate and share for further analysis.
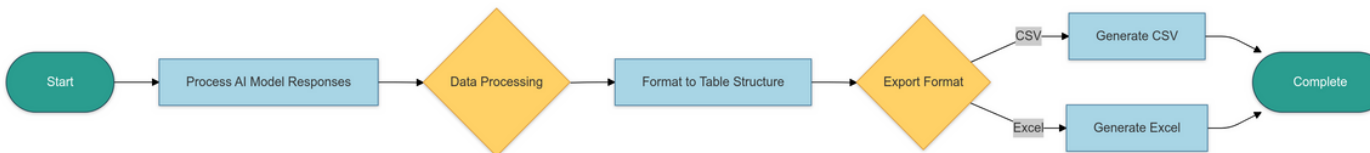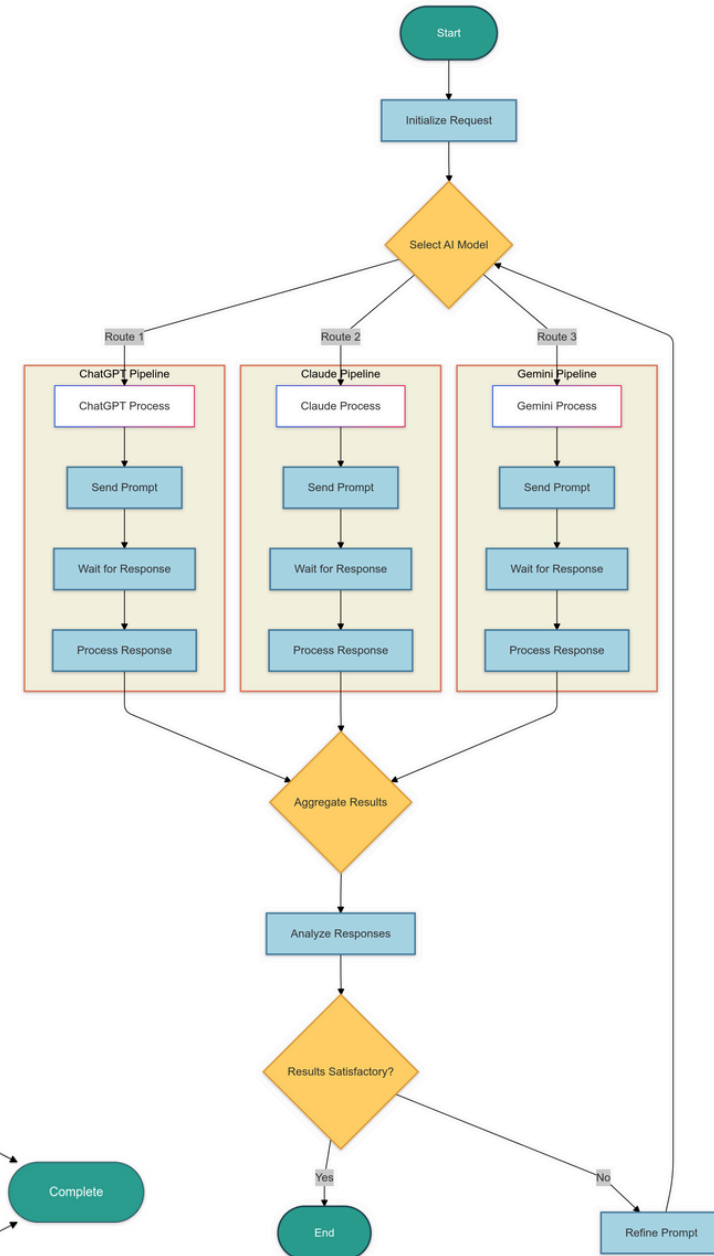
DataTable Design

Prompt (String):

This column stores the text of the user's input or the prompt that is sent to the AI models. It is the key data for initiating the AI model responses.

ChatGPT (String):

This column stores the response generated by the ChatGPT model. The response is stored as a string to capture the output text returned by the model.

Claude (String):

This column stores the response generated by the Claude model. The response is stored in a string format, similar to the ChatGPT response, for consistency.

Gemini (String):

This column stores the response generated by the Gemini model. It also captures the AI-generated text output as a string.
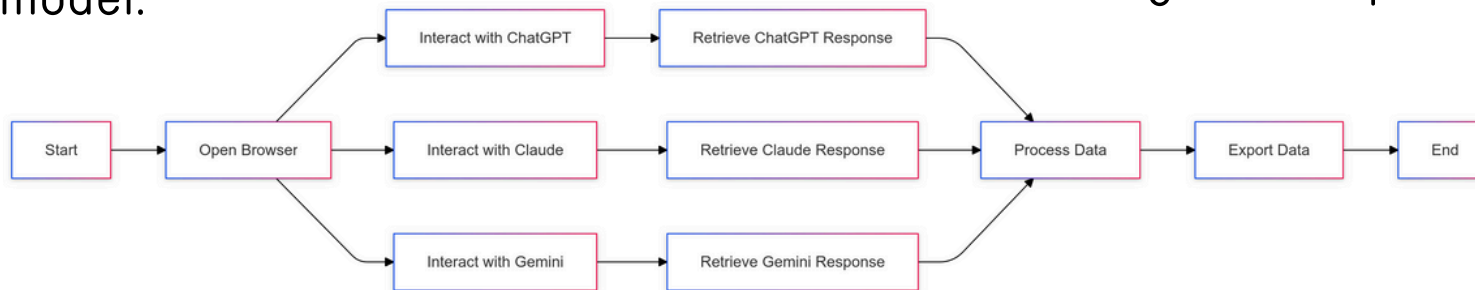
DataTable For CSV

	Prompt (String) ✕ ✎	ChatGPT (String) ✕ ✎	Claude (String) ✕ ✎	Gemini (String) ✕ ✎
✕				
✕				

Process Design

Main Process

The main process in the AI Multi-Prompter Bot starts by **initiating interactions with multiple AI models**. It first triggers the sequence to open the required browser and interact with the AI platforms (such as ChatGPT, Claude, and Gemini). This sequence is defined **in the main process to facilitate smooth interaction** and seamless communication with each AI model.

Sub Process

The sub-processes **handle the individual tasks within the main flow**. For example, a sub-process is used to send the prompt to the AI model, receive the response, and then process the output. These tasks are executed step-by-step for each AI model (ChatGPT, Claude, Gemini). **Each step in the sub-process ensures a detailed interaction**, such as typing a prompt, waiting for a response, and displaying it.


Main Process

Sub Process

Implementation

**Implementation of Module 1: Interfacing with AI Models**

Description: Module 1 handles the interaction with the AI models. It initiates the process by opening the browser and interacting with the interface of the respective AI models. The flow begins by typing a predefined prompt into the AI platform (ChatGPT in this case), followed by receiving the output from the model. The prompt and output are logged and used for further processing. This module also handles necessary delays and input to ensure proper data flow.
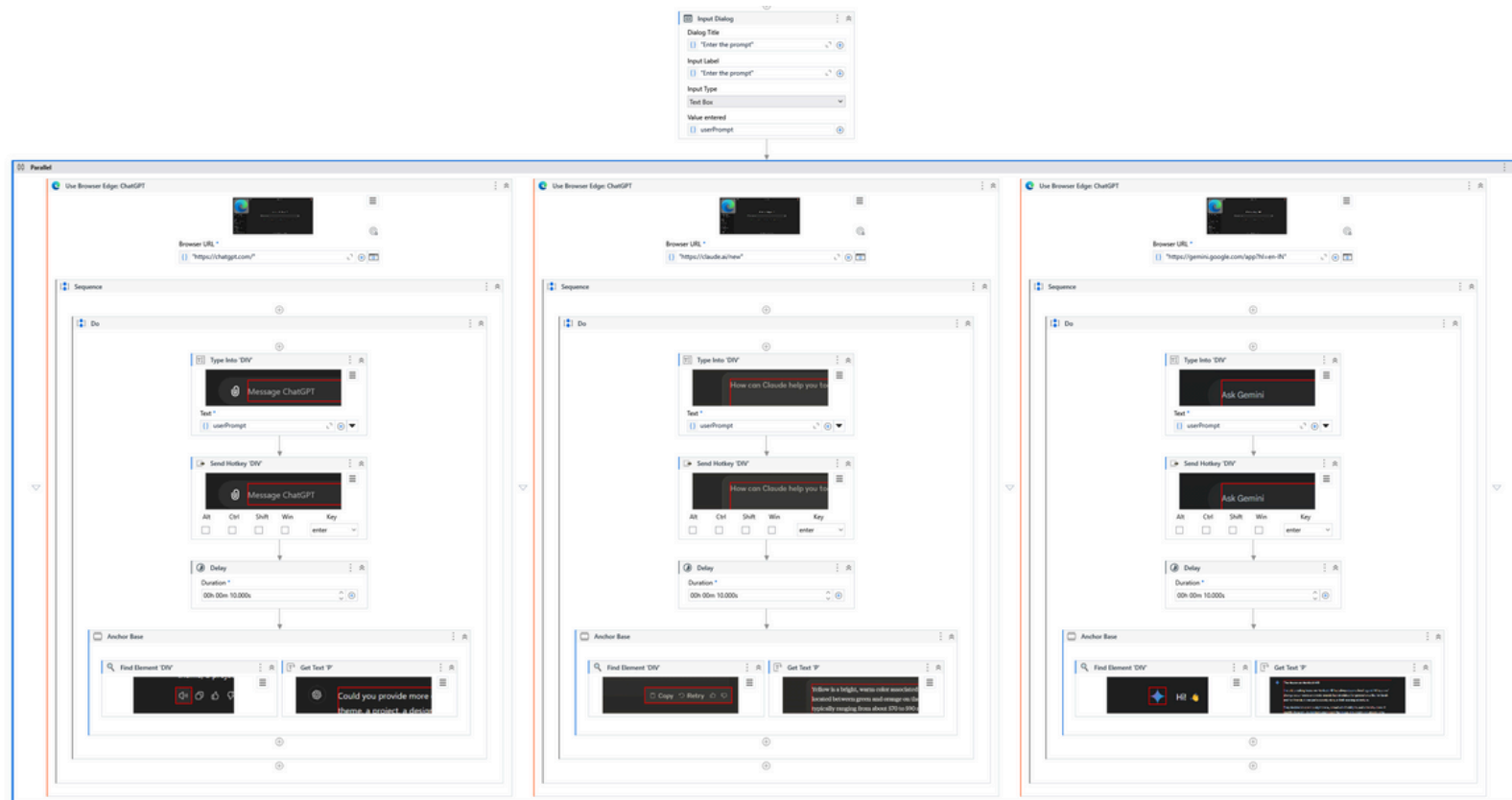
Implementation

Implementation of Module 2: Data Processing and Export

Description: Module 2 handles the data processing of the responses received from the AI models. Once the output is received, it is processed into a structured format (such as CSV or Excel). This module ensures that the data is organized, and relevant details are extracted. It also handles the export functionality, saving the processed data into a file that can be accessed by the user.
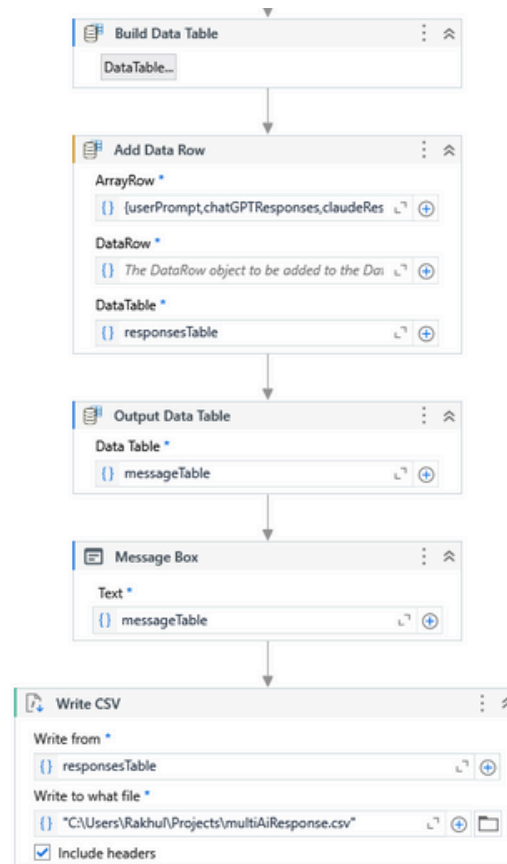
Testing & Screenshots

The AI Multi-Prompter Bot was thoroughly tested for functionality, reliability, and accuracy, including unit and integration testing for seamless AI interactions
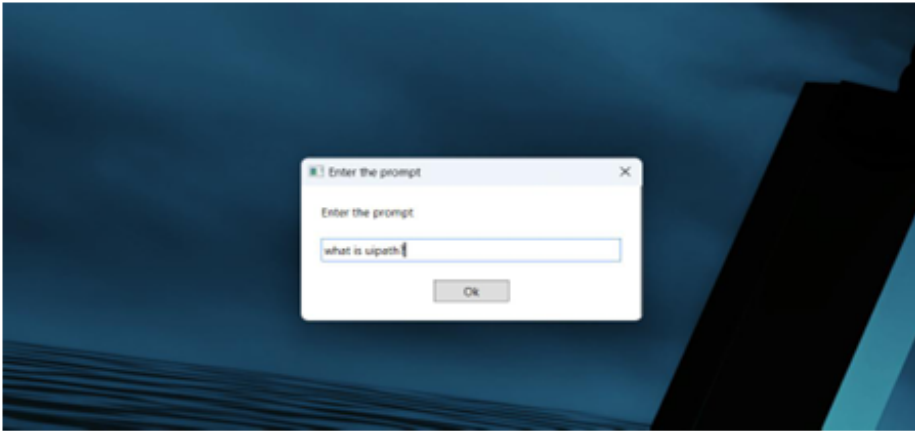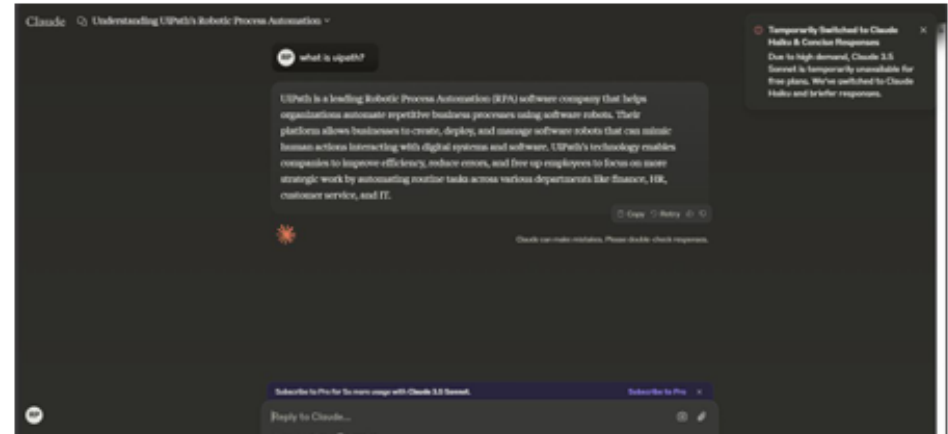

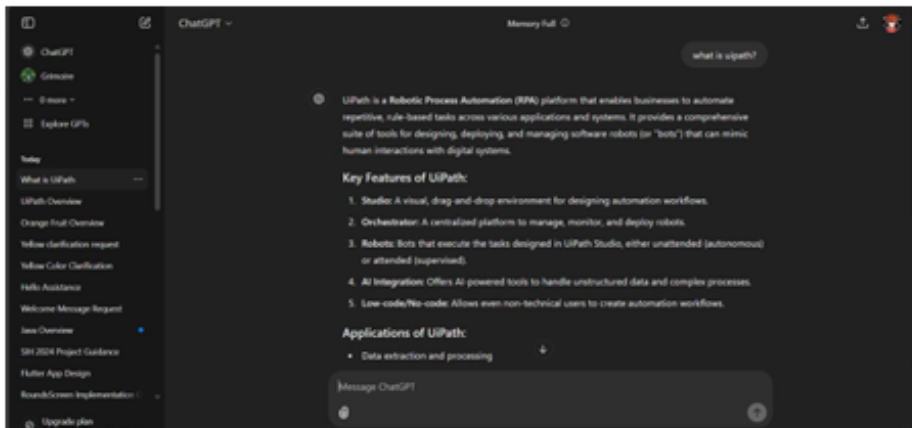Figure: 5.1 Input Dialog

Figure: 5.2 Prompting Claude
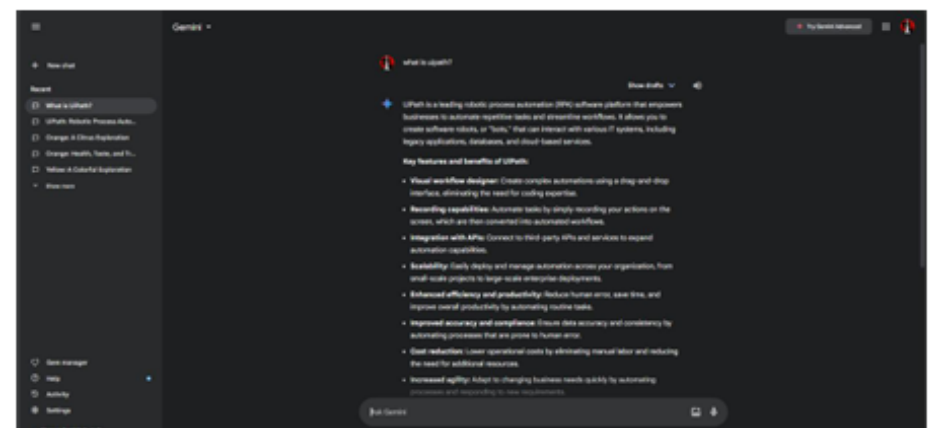

Figure: 5.3 Prompting GPT

Figure: 5.4 Prompting Gemini
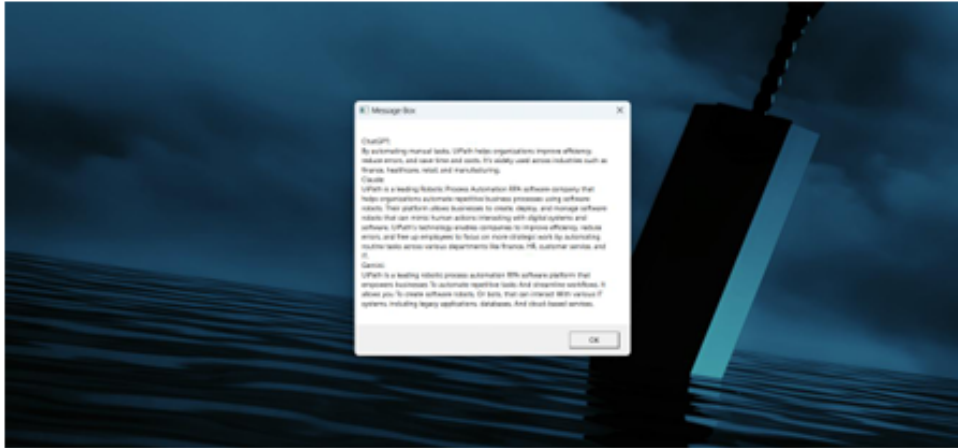
Testing & Screenshots
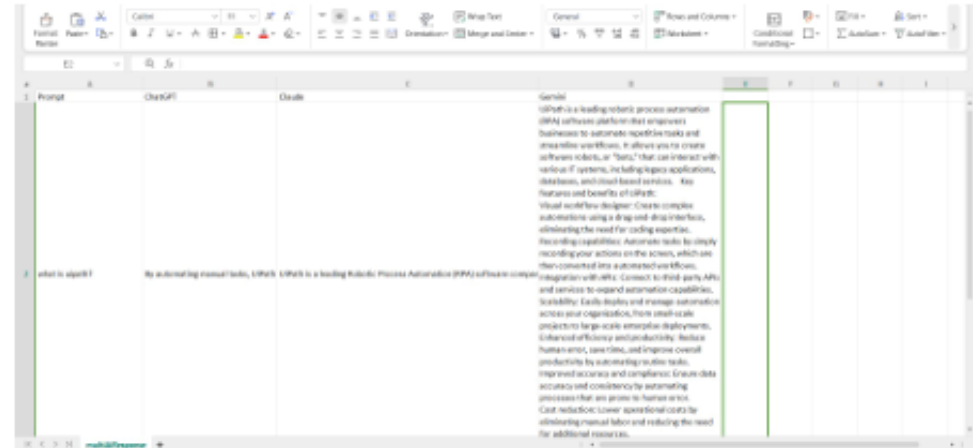

Figure: 5.5 Output in Message Box

Figure: 5.6 Output in CSV

The screenshots above illustrate the key features and output of the **AI Multi-Prompter Bot**, including the user input prompt, responses from multiple AI models, and the structured data export in **CSV and Excel formats**. These screenshots provide a visual representation of the system's user interface, highlighting its simplicity and effectiveness in **automating the aggregation and processing of AI responses.**

Conclusions

The implementation of Robotic Process Automation (RPA) in the **AI Multi Prompter Bot** has successfully streamlined the process of aggregating and organizing responses from multiple **AI platforms, including ChatGPT, Claude, and Gemini.** By automating repetitive and time-consuming tasks, this **system minimizes manual intervention, enhances the accuracy of data collection, and improves overall operational efficiency**. The user interacts minimally by providing a prompt, while the bot handles the tasks of automating web interactions, fetching responses from the AI platforms, processing the data into structured formats, and exporting the results into **CSV or Excel files.**

Future Enhancement

- **Integration with Additional AI Models:** Expanding the system to support new and emerging AI platforms for even broader insights.
- **Support for Advanced Export Formats:** Adding options to export data in JSON, PDF, or directly into database systems for more versatile use cases.
- **Multi-Language Support:** Enabling input prompts and responses in multiple languages to cater to a global user base or diverse linguistic needs.
- **Real-Time Collaboration:** Allowing multiple users to input prompts and access results simultaneously for collaborative decision-making.
- **AI Response Summarization:** Incorporating Natural Language Processing (NLP) to generate concise summaries of AI responses for quick reviews.

References

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Queries

Demonstration

Thank You