ChatNet App Usage Guide

1. Introduction

Purpose:

ChatNet is an AI-powered research and exploration platform like Perplexity or ChatGPT designed for individual users with a unique conversation tree feature for easy navigation. It empowers users to control the direction of their explorations while maintaining a clear understanding of the overall process, helping them avoid long scrolling through information.

Differentiating Factors:

What sets ChatNet apart from existing platforms is:

- Visual Conversation Tree: The conversation tree displays all your queries in the current thread and their parent queries in the Net Pane (on the right side of the screen). This allows you to quickly see the entire conversation history and jump to any point without scrolling through a long chat log.

- User-Driven Branching: Empowers users to direct the exploration according to their choices using a branching concept (see Section 4, Step 2).

- Conversation Merging: Allows users to merge different exploration branches (see Section 4, Step 2).

Target Audience:

Individual users such as researchers who aim to visualize their search patterns and organize their thought process without switching tabs or creating new threads.

Important Request to Users:

As this app is the result of one person's vision becoming reality and cannot be compared against the resources of large chatbot companies with teams of hundreds of people, I kindly ask that you focus on exploring the core ideas and conversation flow. Please consider any design imperfections or errors you encounter as secondary to the overall concept.

System Requirements:

- Compatible with modern web browsers (e.g., Chrome, Firefox, Safari).

- A minimal internet connection speed is necessary for the app to function.

- The minimum necessary screen size for full functionality is a tablet screen with a keyboard. A laptop is recommended for the best experience.

- Please note that since the app is deployed on Render's free tier, it may take up to a minute to load when you first use it, as Render puts the app to sleep to conserve resources. There is a good chance the app might take close to a minute to get started, and then there is no lag while using, but it would happen for every new session. Please be patient during this initial loading time.

2. Access and Setup

Step 1: Access the Website

Visit the ChatNet website via your preferred browser. Initial page would be login since you aren't logged in yet.

Step 2: Account Creation

Users must sign up if they are new. After successful signup, they will be redirected to the login page to log in.

Step 3: Login Process

After logging in, users are redirected to the Home Page (also called "New Thread" page). When logged in, your session will last for 30 minutes. After this time, you will be required to log in again to continue using the application.

3. Key Features

General Page Structure:

Most pages within the app are structured as follows:

- Main Menu:
    - New Net Button: Starts a new exploration thread.
    - Home: Returns to the home screen.
    - Library: Lists all the user's saved conversation threads.
- Login Bar:
    - Username: Displays the currently logged-in user's username.
    - Logout Button: Allows the user to log out of their account.
- Chat Pane:
    - Provides a query input field for entering your query.
    - Displays the active exploration as it progresses.
- Net Pane: Displays a conversation tree for dynamic navigation.

Messaging Features:

- Regular exploration flow for typing one query after another.
- Navigate back to a previous stage in the exploration by clicking nodes in the dynamically generated tree. You can then continue the conversation.
- When merging nodes, the first selected node is designated as the main parent, and the merged node is attached to that parent for organizational purposes in the tree. The AI takes into account all the selected nodes along with the option of including history or not.

- When a multiselection of nodes is done (primary node selection then Ctrl+Click on the others): (Currently, 'Ctrl+Click' is the only way to select multiple nodes. Touchscreen devices are not fully supported for multi-selection at this time. Support for touchscreen devices is planned for a future update.) The first selected node is designated as the main parent, and the merged node is attached to that parent for further purposes, while the other parent nodes remain. This design choice supports continuous explorations even after merging, treating the merged node similarly to a normal node. Merged nodes are visually represented in the tree using a dashed line connecting them to their main (first) parent.

- In the Net Pane, the merged node's query will show its parent queries right under it.

- The merge state functions the same as a regular follow-up query. It expects you to input a new query that you would like answered, based on the combined query and conversation history displayed above it in the chat pane. It's important to note that the merge state is temporary; it's a transitionary state solely for creating the merged node. After you submit a query in the merge state, the chat will revert to the history of the main parent query and continue from that point. This temporary merge state helps prevent information overload. By separating the merging process from the ongoing conversation, it makes the complex network of information easier to understand and manage.

- When the AI uses web search to answer your query, the response will include a "Sources" section. This section lists the URLs of the websites used. These URLs are direct links to the original sources.

Privacy and Security:

- Passwords are encrypted before storage to ensure user security.

- Conversations are not encrypted. Users are advised to avoid including personal information while exploring the app's functionality.

- Conversations are inaccessible to other users, even if someone attempts to edit the URL. Only authorized users with valid credentials can access their data unless credentials are shared.

Notifications and Alerts:

- There are pop-up alerts on four occasions: user sign-up is successful, an empty query is submitted in the new thread page, an empty query is submitted while continuing a thread, and the user is successfully logged out. (Currently, there is no option to disable these pop-up alerts.)

Profile Management:

- There is no profile management feature. The only details required are a username and password during sign-up. There are no restrictions on usernames or passwords, except that they cannot be empty, and the password must match the confirmation password.

4. Using the App

Step 1: Starting a Chat

Click the New Net button and enter a query in the text box that appears.

Step 2: Continuing Explorations

- Users can continue typing queries sequentially.

- Alternatively, you can click on any node in the conversation tree. This will take you back to that point in the exploration, and you can continue the exploration from there, branching off in a new direction. To return to a previous point in the conversation, simply click on the desired node in the conversation tree. There is no 'back' button; clicking a node is how you navigate. This allows you to drive the conversation according to your choice.

- Select two or more nodes (primary node selection then Ctrl+Click on the others) to merge exploration branches.

Step 3: Managing Past Threads

Use the Main Menu to access the library and continue previous threads. By default, past threads will display the most recent query's history or branch.

5. Future Work and Limitations

Current Limitations:

- Requires a minimum tablet-sized screen; a laptop is recommended.

- Not fully encapsulated as an AI-powered research and exploration platform along with the web search tools it uses.

- Lengthy conversations may not be fully supported due to limits in information processing.

- The implementation of a context builder for the LLM has been postponed prioritizing presenting the app's concept over response quality.

- Currently, no restriction is placed when the history of one selected query is a superset of another selected query's history in merge state (which is redundant).

- This is a text-only chatbot and is not yet capable of the wide range of functionalities available in existing chatbots (e.g., image or voice input).

Future Work:

- Address the redundancy issue where one selected query's history is a superset of another selected query's history. This is considered an optimization feature.

- Enhance the visual presentation of selected nodes in the tree. Currently, only the selected nodes are highlighted. Future work includes highlighting the entire path in the tree for both single query histories and merged query histories to make the interface more intuitive.

6. Feedback and Improvement

Would appreciate users for providing any feedback at below email.

If the app throws an unintended error that does not make sense, please take a screenshot of the error and send it to **chaithanyasaibommavaram@gmail.com**.

Below in one example conversation flow to app's features

1. Login Page – Initial page

ChatNet

Login

Username

Password

Login

New user? Sign up here.

2. Signup Page - If you aren't signed up yet

ChatNet

Sign Up

Username

Password

Confirm Password

Sign Up

Already have an account? Login here.

**3.** Fill the form and hit "Sign Up" button and then you would see the below screen
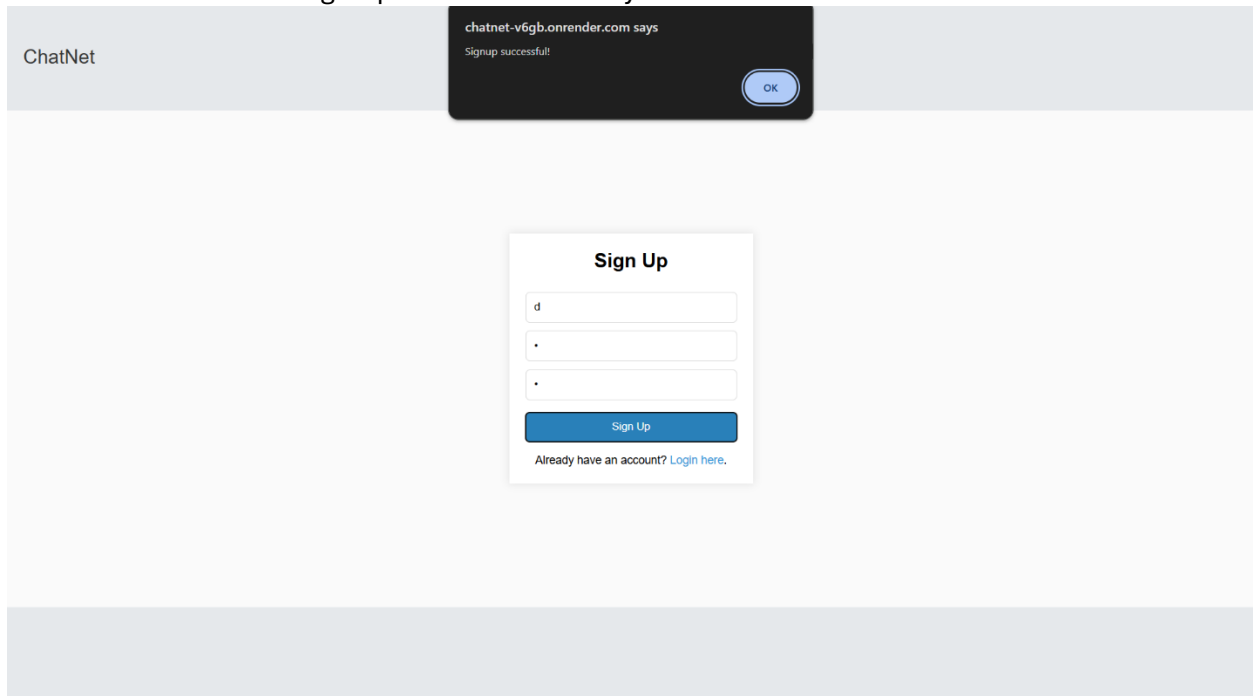
4. After this you would be redirected to login page. Now use the same details as sign up page to login. Upon successful login, you would see the below page
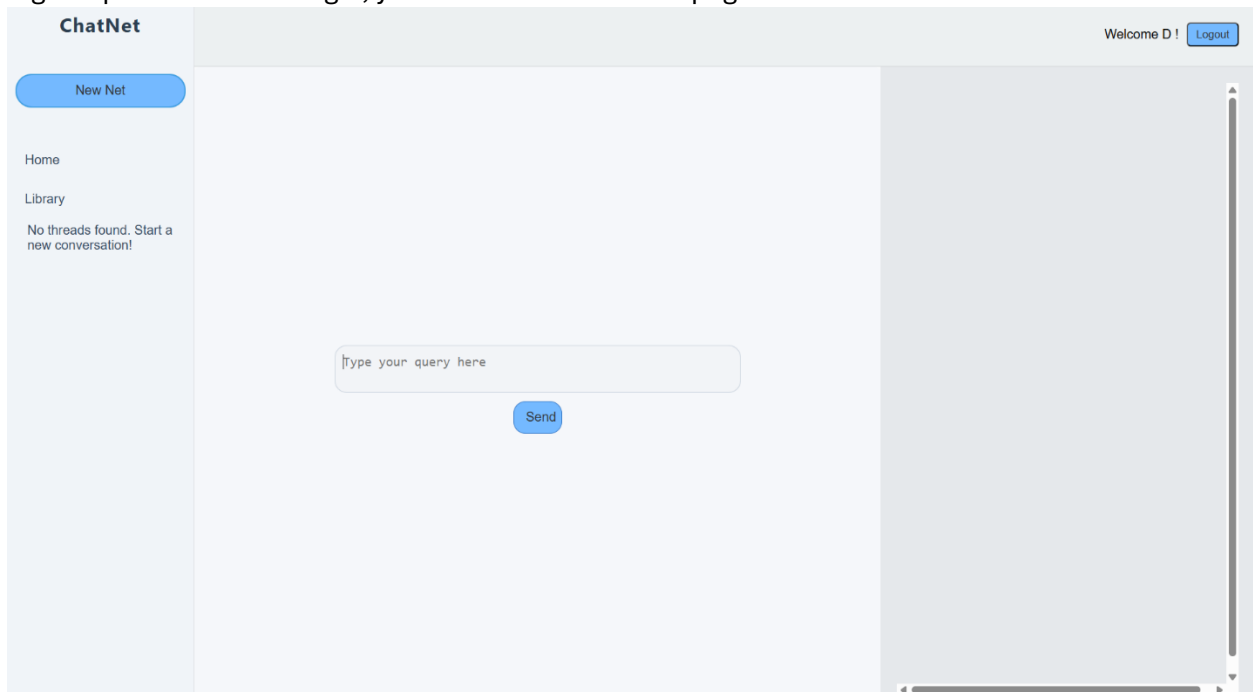
5. Enter your query in the query box in the center of the page as below and hit "send" button. Please wait until new page comes up to show you chat interface along with your query and AI response to it
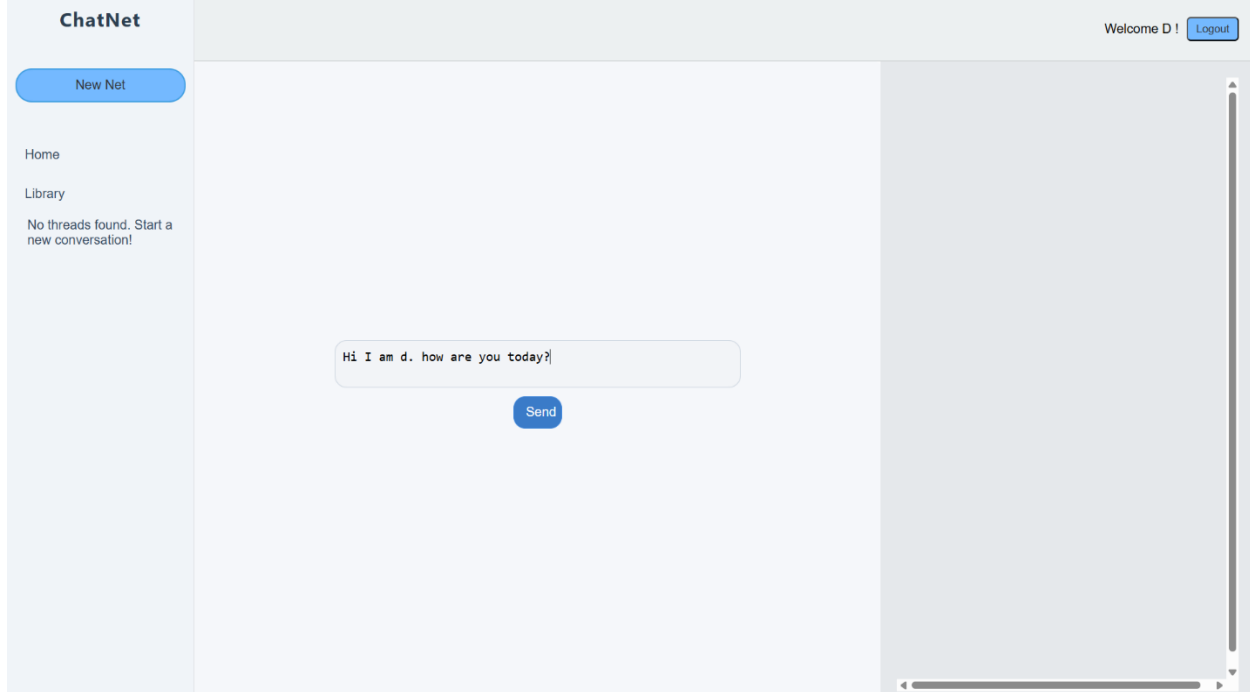
6. You might see a page that might look like the one below.
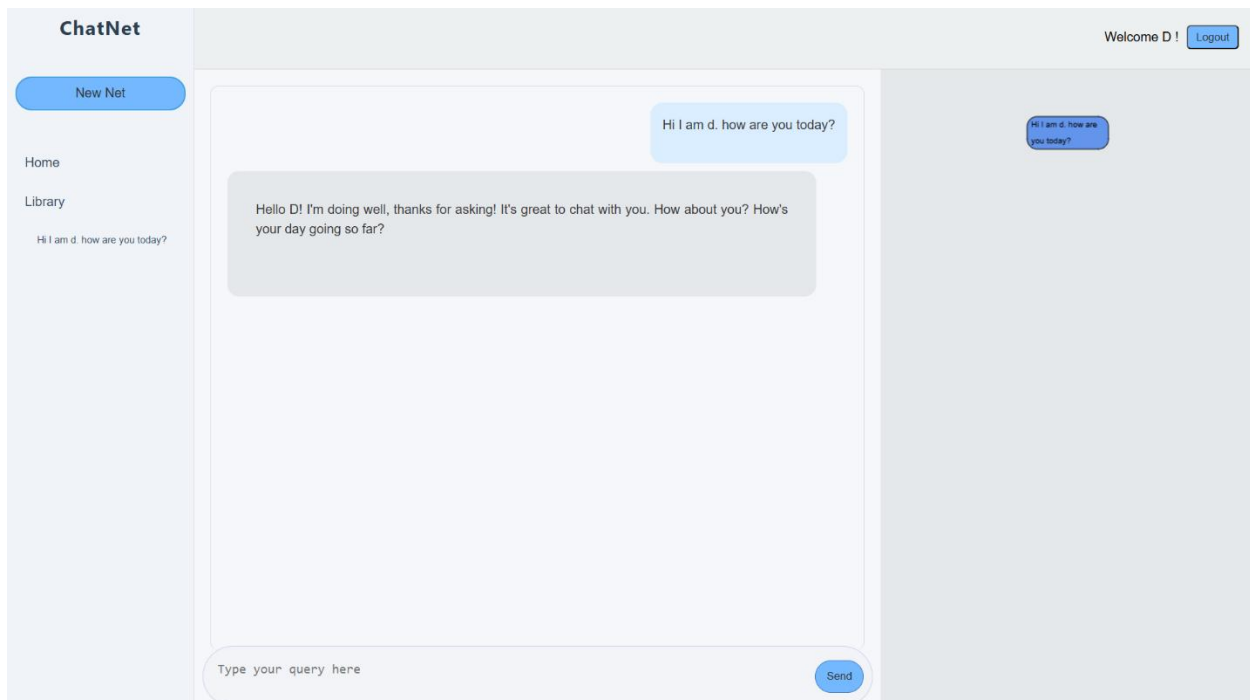
7. Now I continue the conversation using next query and its response as below. Three images are stages of that query processing to give you idea of the process

Stage 1: Entering query in query box below
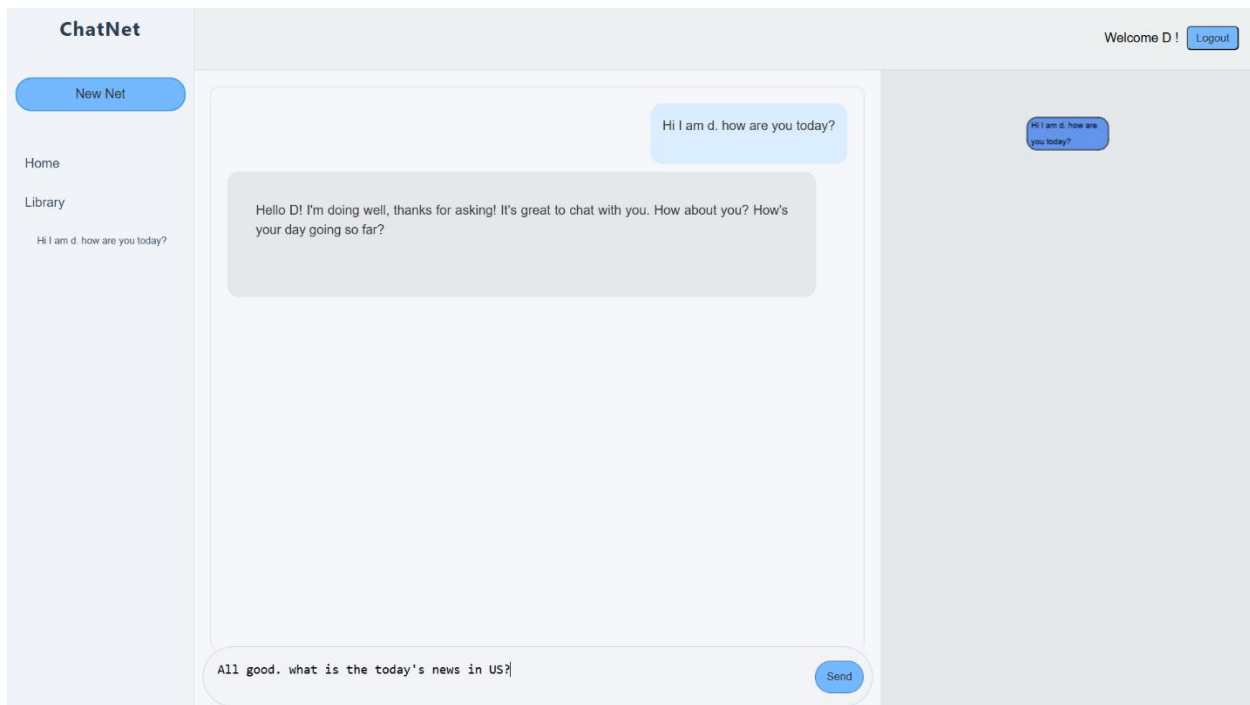
Stage 2: Initially you would see your query get entered in chat as below and we are waiting for AI's response for this query at this point
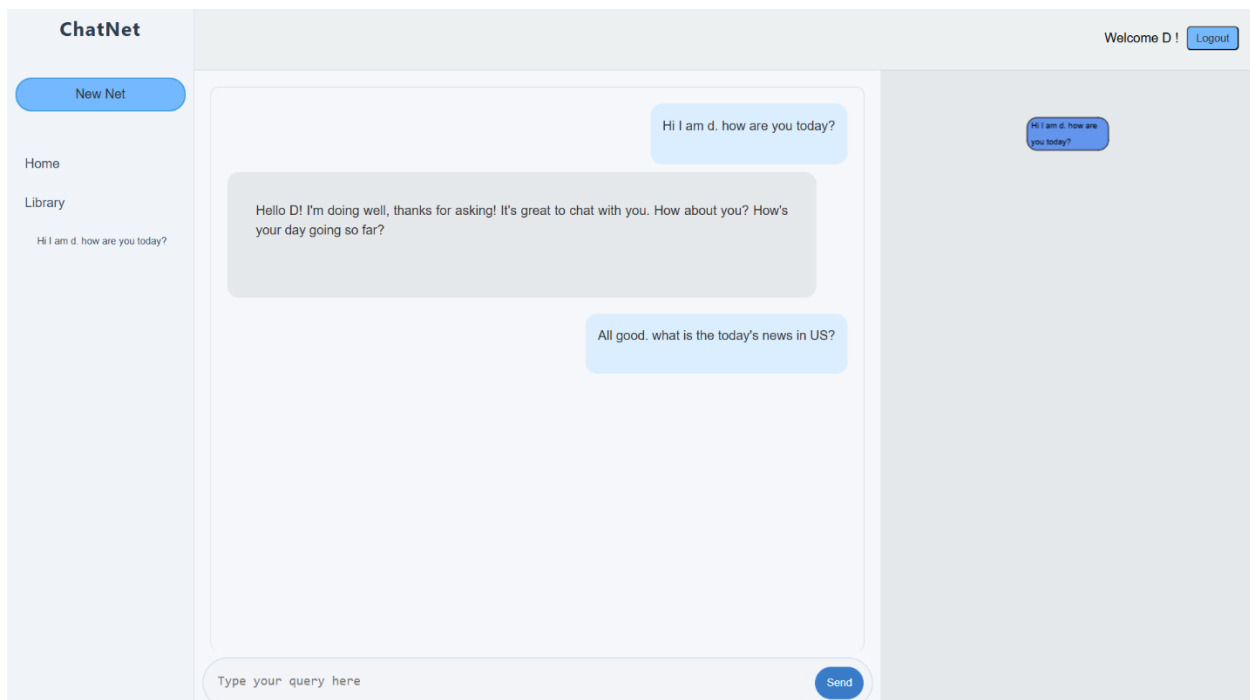
Stage 3: We get the AI response and along with a node connecting the prior query node to recent query we just entered to the conversation tree in the net pane on the right of chat area as shown below. You can also see a new section of sources getting added since latest news from web is used to answer and you can see the URLs attached as genuine links you could further explore.
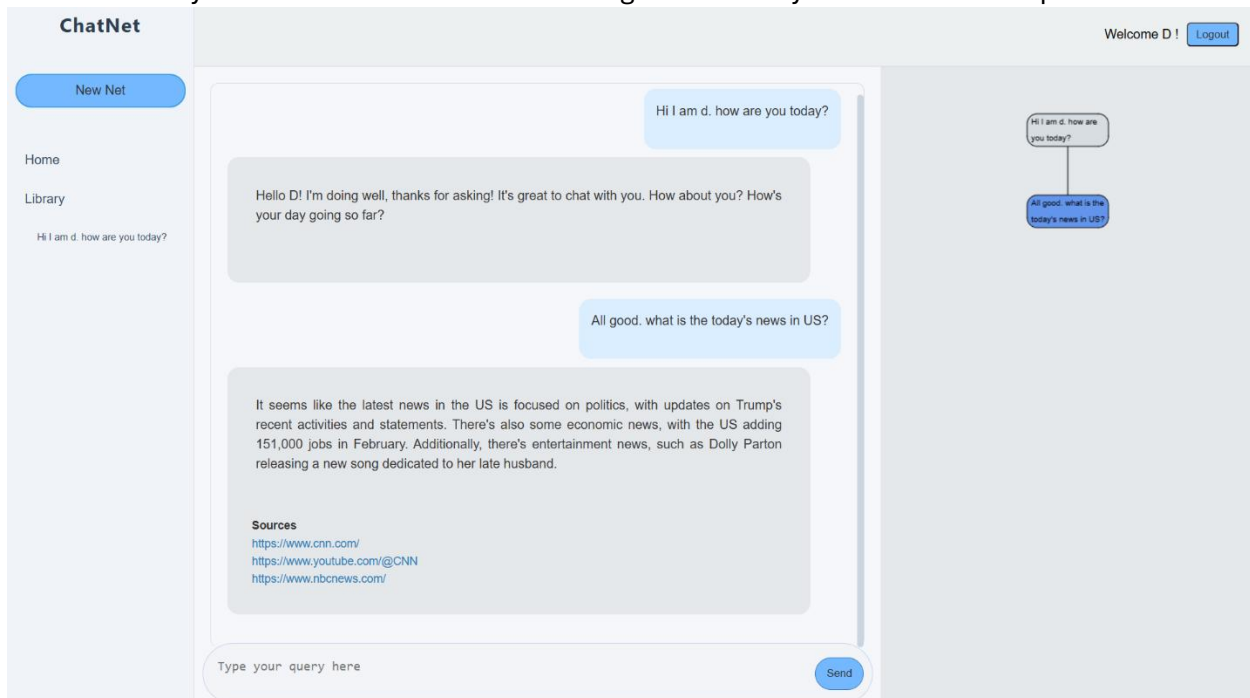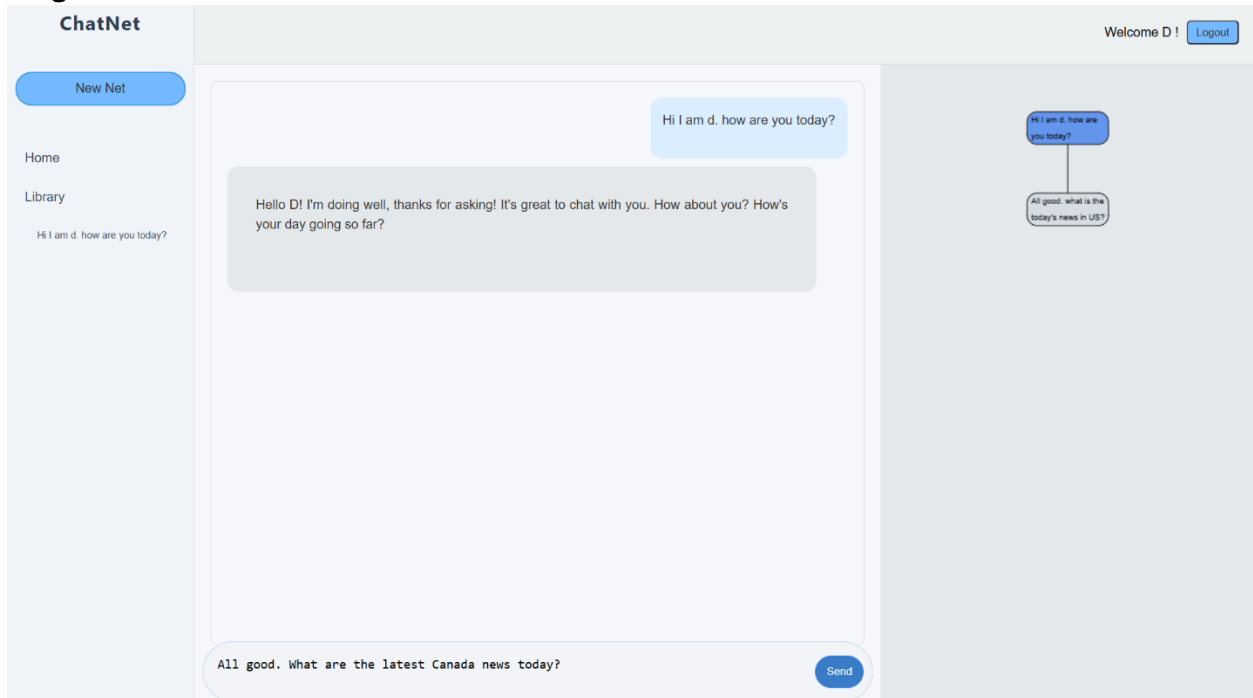
8. We now navigate back to previous conversation state by clicking on the node of the tree, in this case it is the root node that starts with "Hi I am d...". So you would see the conversation until that point from root as if you haven't give the "latest news in US" query at all as below
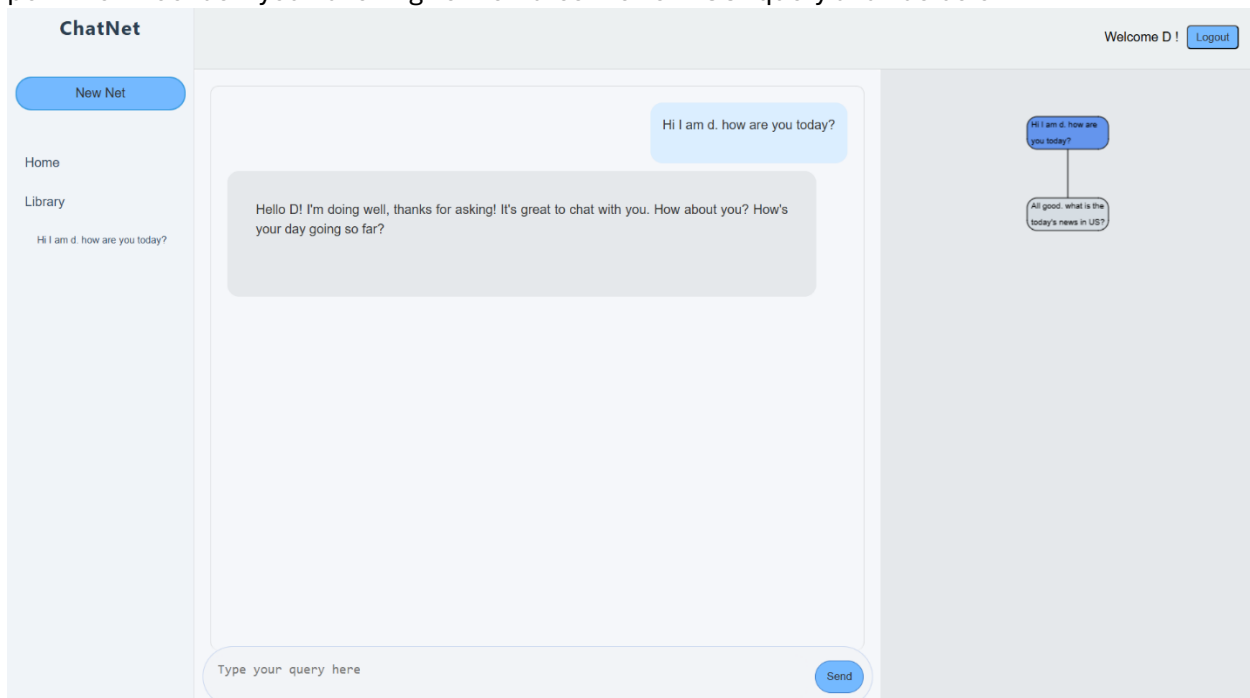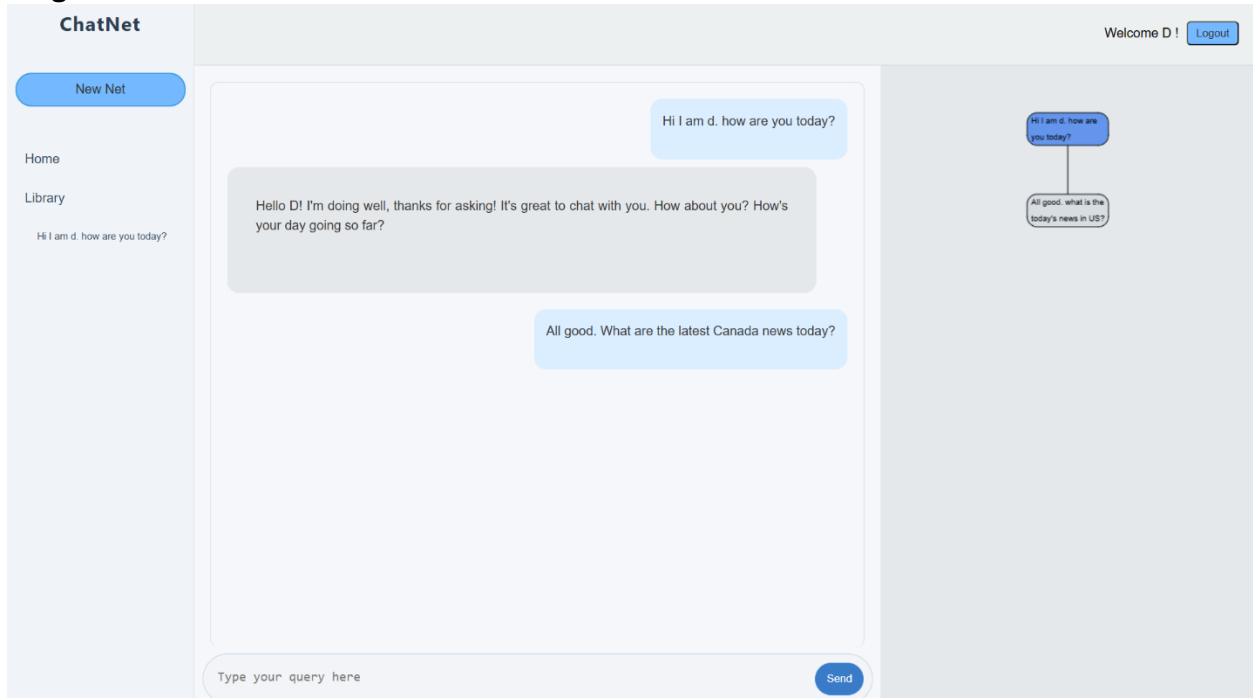
9. Again give another query in the query box at this point to branch off and stages are shown below.

Stage 1:

Stage 2:

Stage 3:

10. Lets now merge both the individual queries along with their responses to get summary of both Canada and US's latest news

Stage 1: Hold ctrl and click on the "today's news in US" node of conversation tree. Mind you that "latest news in Canada" is already selected and is the first parent so the future query node is going to be attached to "latest news in Canada" node as you will see further below
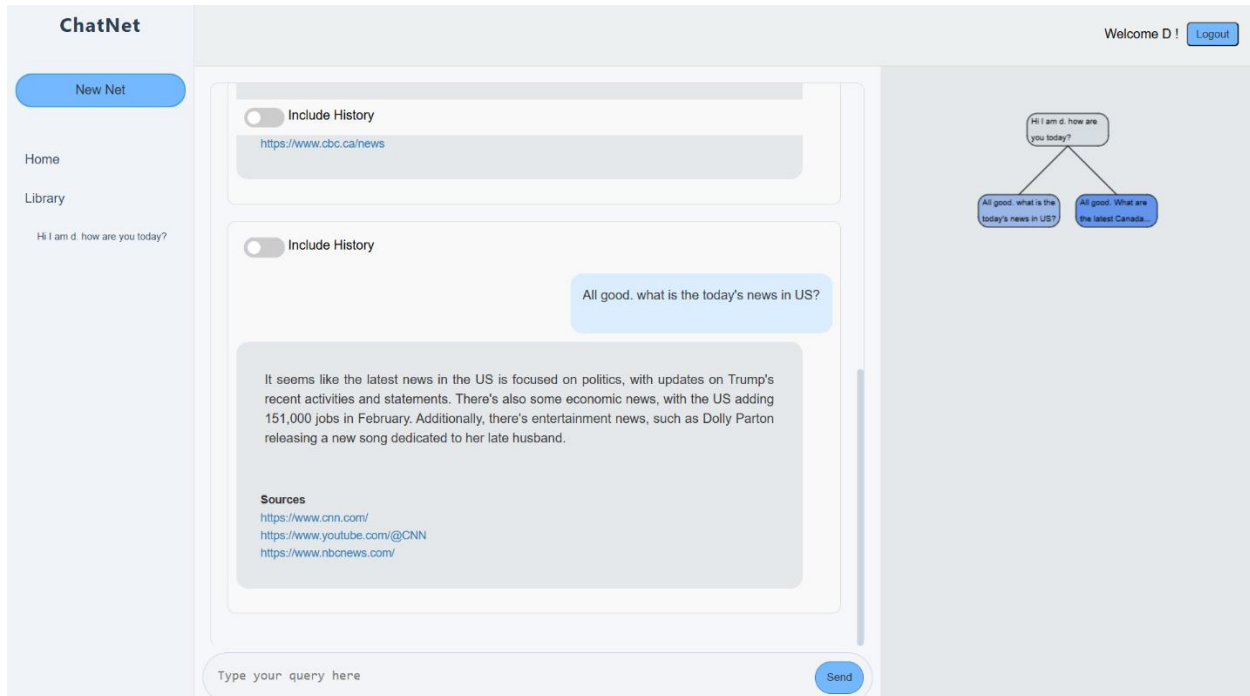

**Info:** If you scroll to top you would see the heading Merge State

Info: By default, history of each selected query is collapsed, you could choose to view by clicking on the show history button in that particular query container's options at the top as shown below
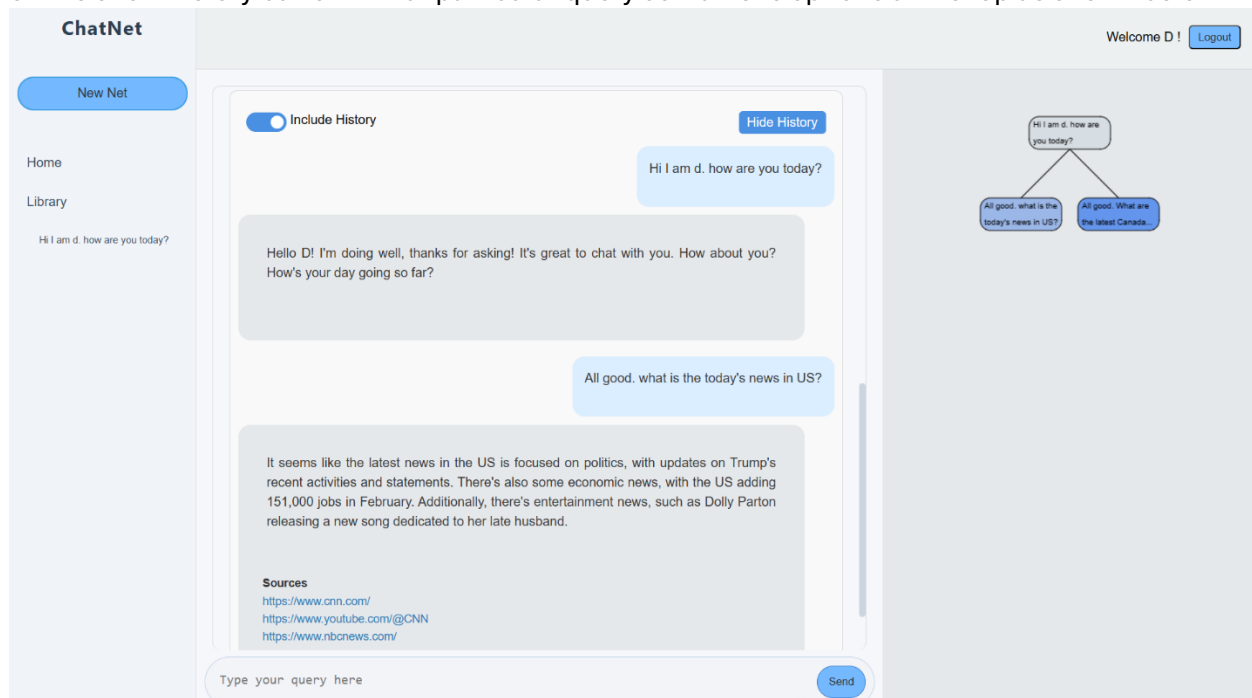
Stage 2: Since I intend to use only just the selected queries, I toggled off both history

Stage 3: Now we enter the query that we want to be answered based on the context selected above the query box as shown below
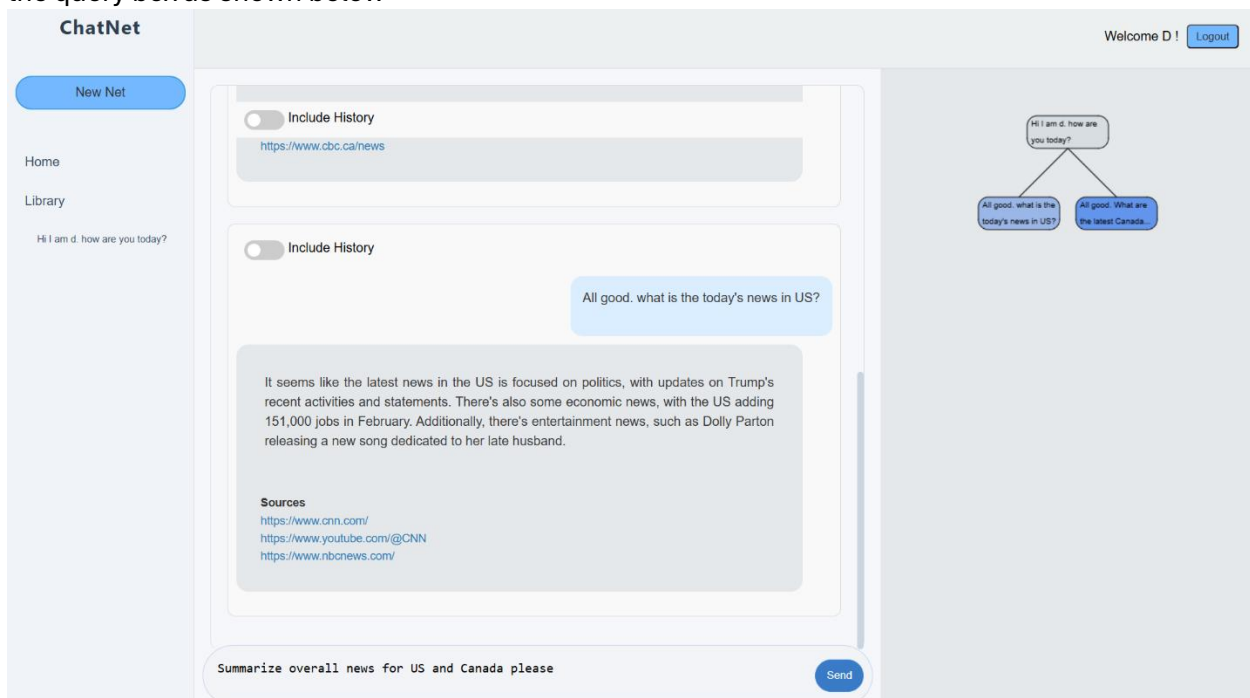
Stage 4: When "send" button is hit, you might see similar response as below. Here the "summarize overall news for US and Canada please" is having a section inside it named parent queries to reflect list of all the parent queries used for that particular merged query.

Red color symbol signifies no history used for that query, there is another green symbol that signifies history used for that query.

You might have also noticed the tree on the right got the merged node connecting with its first parent node with dashed line serving pictorial representation.

11. As mentioned you can still continue the conversation from a merged node, demonstrating that I am going to give a follow up query as below

Stage 1:

Welcome D ! Logout

New Net

Home

Library

Hi I am d. how you today?

1. All good. What are the latest Canada news today? 🚫
2. All good. what is the today's news in US? 🚫

Here's a summary of the latest news from the US and Canada:

US News:

- Politics: Trump's recent activities and statements are making headlines.
- Economy: The US added 151,000 jobs in February, a positive sign for the economy.
- Entertainment: Dolly Parton has released a new song dedicated to her late husband.

Canada News:

- Politics: Trudeau is heading to Europe to strengthen alliances amidst Trump's threats, while Freeland is dealing with a "malicious" WeChat campaign allegedly tied to China.
- Crime: A Calgary man has been found guilty of raping a 90-year-old woman, and Guelph police are seeking help to find missing individuals.
- Sports: Marielle Thompson has won her 3rd straight ski cross gold medal.
- Social Issues: Parents are warning about the dangers of social media app Snapchat, which they claim gives kids access to illicit drugs, and advocates are speaking out against Kanye West's harmful comments about autism.

Let me know if you'd like me to expand on any of these topics!

ok. Thank you! Good night

Send

Stage 2:

Welcome D ! Logout

New Net

Home

Library

Hi I am d. how you today?

- Entertainment: Dolly Parton has released a new song dedicated to her late husband.

Canada News:

- Politics: Trudeau is heading to Europe to strengthen alliances amidst Trump's threats, while Freeland is dealing with a "malicious" WeChat campaign allegedly tied to China.
- Crime: A Calgary man has been found guilty of raping a 90-year-old woman, and Guelph police are seeking help to find missing individuals.
- Sports: Marielle Thompson has won her 3rd straight ski cross gold medal.
- Social Issues: Parents are warning about the dangers of social media app Snapchat, which they claim gives kids access to illicit drugs, and advocates are speaking out against Kanye West's harmful comments about autism.

Let me know if you'd like me to expand on any of these topics!

ok. Thank you! Good night

You're welcome! It was nice chatting with you, D. Good night to you as well!

Type your query here

Send

12. Now I am going to finally click on the logout button at the top right to logout. I see the following alert.

ChatNet

New Net

Home

Library

Hi I am d. how are you today?

chatnet-v6gb.onrender.com says
Logged out successfully

OK

Welcome D ! Logout

- Entertainment: Dolly Parton h

Canada News:

- Politics: Trudeau is heading to Europe to strengthen alliances amidst Trump's threats, while Freeland is dealing with a "malicious" WeChat campaign allegedly tied to China.
- Crime: A Calgary man has been found guilty of raping a 90-year-old woman, and Guelph police are seeking help to find missing individuals.
- Sports: Marielle Thompson has won her 3rd straight ski cross gold medal.
- Social Issues: Parents are warning about the dangers of social media app Snapchat, which they claim gives kids access to illicit drugs, and advocates are speaking out against Kanye West's harmful comments about autism.

Let me know if you'd like me to expand on any of these topics!

ok. Thank you! Good night

You're welcome! It was nice chatting with you, D. Good night to you as well!

Type your query here

Send

That is the complete one example while all necessary information is covered in the text above too.

Thank you.