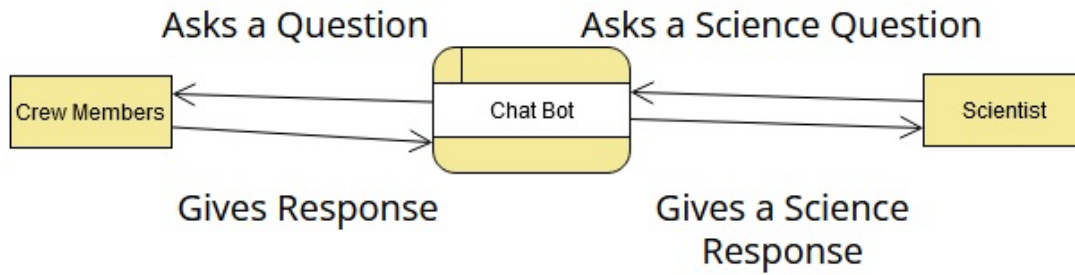


Assignment #3 Documentation

GitHub ReadMe File

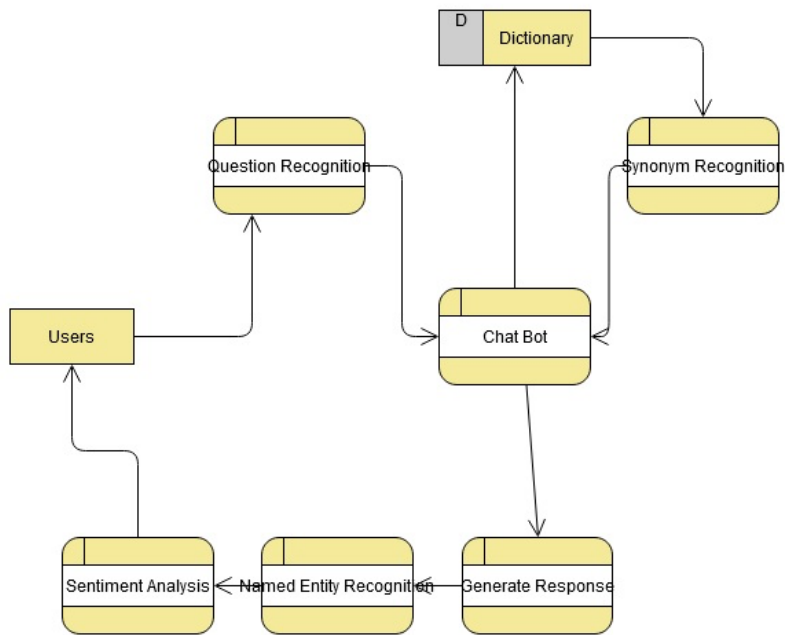
<https://github.com/Overseer9000/COSC310A2/blob/main/README.md>

Level 0 Data Flow Diagram



In this simple level 0 DFD we see the interaction between the two respective users Crew Members and Scientists and how they interact with the chat bot.

Level 1 Data Flow Diagram



In this more advanced level 1 DFD we see how each part works in the chat bot. Firstly the user asks a question and goes through the recognition or parsing system to find how the bot will respond. Then the chat bot will go through the dictionary and see if any inputs match the dictionary using synonym recognition to find any related words. Then the chat bot generates response and uses named entity recognition and sentiment analysis to determine who is asking the question (if anyone) and their sentiment towards the bot. Finally, the user gets a response from the chat bot finishing the loop.

GitHub Repository

Main Repository

<https://github.com/Overseer9000/COSC310A2>

Commits

<https://github.com/Overseer9000/COSC310A2/commits/main>



Network Graph



7 Pull requests merged by 2 people

	Added Process of Creation and Expanded Code Description	#7 merged yesterday
	Synonym Merge	#6 merged yesterday
	Core nlp named entity recognition	#5 merged yesterday
	Core nlp sentiment	#4 merged yesterday
	Update GUI	#3 merged 2 days ago
	Update dictionary	#2 merged 2 days ago
	J unit testing	#1 merged 9 days ago

Sample Output

```
User > I am Abhiek
OS > Hello, human.
User > Can you help me
OS > Ask me anything and I will do my best to respond! I am still
learning, so your best bet is to state things clearly. It helps if you ask
a question that includes one of [who, what, when, where, why, or how]!
User > When can you help me
OS > I can assist you whenever.
User > Where is Dave
OS > I am sorry, I can not disclose the location of crew.
User > Who are you
OS > Hm, it seems I was unable to understand what you said.
User > Who is OS
OS > I am OVERSEER. My job is to help the crew of the Blue Dwarf.
User > where is the ship right now
OS > The ship Blue Dwarf is in an elliptical orbit around the star
Betelgeuse.
User > where is our home
OS > Hm, it seems I was unable to understand what you said.
User > Where is Earth
OS > Earth is currently 548 light years away from that pale blue dot.
User > What is outside
OS > There is nothing but space outside.
User > do we have oxygen
OS > We have sufficient oxygen for another 184 days.
User > where are the crew members
OS > It is not within my capabilities to track crew members.
User > Where is security
OS > Security officers are currently located at [ERROR, NO SECURITY
OFFICERS FOUND].
User > You are making me angry
OS > Hm, it seems I was unable to understand what you said.
User > i am getting angry
OS > I understand your frustration, please let me help you.
User > i hate this place
OS > Hm, it seems I was unable to understand what you said.
User > i hate you
OS > Hm, it seems I was unable to understand what you said.
User > where is the bathroom
OS > The bathrooms are located directly next to the sleeping quarters as
well as captain quarters.
User > Where can i sleep
OS > The sleeping quarters are located directly next to the captain
quarters.
User > When can i sleep
OS > "The curfew is at 10.
User > what time is it
OS > The current time is 10h00 UTC.
User > who is Bob
OS > I cannot share personal details about passengers or crew members.
```

Limitations

- Unable to handle more than 1 sentence and give a proper response.

```
User > hello OS, my name is Abhiek. Can you help me?
```

```
OS > Hello, human.
```

- Only understands a limited number of keywords

```
User > where is the washroom
```

```
OS > Hm, it seems I was unable to understand what you said.
```

Features that can be shared

1. Sentiment analysis
2. Synonym recognition
3. Named entity recognition
4. Parse input – Cleans user input and looks for keys in the input
5. File Reader – allows for easily reading a correctly formatted text file, which then sorts the text inside the file into responses and Keys