

CS359: Computer Network Lab

Indian Institute of Technology Patna

Lab 8

Basic Medicine Chatbot

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Objective

We use socket programming to make a basic medicine chatbot for this assignment.

Procedure

- Similar to the multithreaded chatroom server, I've made client and server scripts to allow multiple clients get access to the chatbot.
- Once any client is connected to the server, they can give an input of a disease (which may or may not be present in the data).
- This request is passed on to the server which then extracts the excel sheet which has a few diseases mapped to their remedies.
- We parse the excel sheet for a match to the request and on finding one, send that back to the respective client. If we do not find any remedy, a message saying 'Could not find in data' is printed in terminal.
- In this manner, a user/client can make several requests in one connection.

Execution

The below screen shot shows 2 clients (right side) connected to the server (left side). Both of them request for medicine and obtain respective solutions. Chatbots are automated bots to give quick and precise responses to any type of requests from the client. This is what is achieved through this assignment. By exploiting data, we are able to provide a software which allows multiple people look for remedies parallelly

The screenshot displays a Windows desktop with a code editor and two PowerShell windows. The code editor shows a Python script named `server.py` with a traceback indicating a `ConnectionResetError`. The terminal window shows the server's execution, including connection logs and client interactions. Two PowerShell windows on the right represent clients. The first client, 'bro', interacts with the chatbot, providing symptoms and receiving advice. The second client, 'var', also interacts with the chatbot, providing symptoms and receiving advice.

```
server.py
During handling of the above exception, another exception occurred:

Traceback (most recent call last):
  File "C:\Users\varsh\anaconda3\lib\threading.py", line 932, in _bootstrap_inn
    self.run()
  File "C:\Users\varsh\anaconda3\lib\threading.py", line 870, in run
    self._target(*self._args, **self._kwargs)
  File "server.py", line 39, in handle_client
    client.send(f'{alias} has left the chat!'.encode())
ConnectionResetError: [WinError 10054] An existing connection was forcibly close
d by the remote host
(base) PS D:\sem6\Networks lab CS359\lab8> cd ../lab5
(base) PS D:\sem6\Networks lab CS359\lab5> python server.py
Server is running and listening...
Connection is established with ('127.0.0.1', 57154)
New client: var
Server is running and listening...
(base) PS D:\sem6\Networks lab CS359\lab8> cd ../lab8
(base) PS D:\sem6\Networks lab CS359\lab8> python server.py
Server is running and listening...
Connection is established with ('127.0.0.1', 57387)
New client: var
Server is running and listening...
Connection is established with ('127.0.0.1', 57393)
New client: bro
Server is running and listening...
Medicine required for Eczema
Medicine required for Indigestion
Medicine required for Fever

Windows PowerShell
[::]:5353 *:* 17024
[::]:52501 *:* 14232
[::]:55319 *:* 3552
[::]:60336 *:* 17288
[::]:60834 *:* 17288
[::]:1900 *:* 3860
[::]:62962 *:* 3860
[fe80::b124:40b9:51e2:f40c547]:1900 *:* 3860
[fe80::b124:40b9:51e2:f40c547]:2177 *:* 1968
[fe80::b124:40b9:51e2:f40c547]:62961 *:* 3860
(base) PS C:\Users\varsh> kill 2908
(base) PS C:\Users\varsh> cd 'D:\sem6\Networks lab CS359\lab8'
(base) PS D:\sem6\Networks lab CS359\lab8> python client.py
Choose a username >>> bro
Welcome to your medical chatbot!
Enter symptoms to check for medicine >>> Eczema
Try treating it with Hydrocortisone cream
Enter symptoms to check for medicine >>>

Windows PowerShell
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

Loading personal and system profiles took 1089ms.
(base) PS C:\Users\varsh> cd 'D:\sem6\Networks lab CS359\lab8'
(base) PS D:\sem6\Networks lab CS359\lab8> python client.py
Choose a username >>> var
Welcome to your medical chatbot!
Enter symptoms to check for medicine >>> Indigestion
Try treating it with Ranitidine
Enter symptoms to check for medicine >>> Fever
Try treating it with Paracetamol
Enter symptoms to check for medicine >>>
```

