CS 335: Chatbot

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1 TASK

Create an Eliza like program. For a description of what Eliza is, look here

You should be able to ask Eliza about anything and include feelings, relationships and activities. Eliza should respond sensibly.

You will need to use regular expressions in this class. Please refer to the resources page to learn about regular expressions.

2 MUST HAVE

Your work must comply with the following:

- Your homework must be done in Python. You can use the `re` and `random` libraries only.

- Your agent must ask for the user's name and greet that user using her/his name: 20pts. (e.g. if I say "I am John" or "John is my name", the system should say "Hello John")

- Your agent must recognize the following feelings: sadness,happiness and joy and its derivates (e.g. sad, happy, joyful, joyfulness, saddened, etc.) within the user's input, and respond accordingly. HINT: Try to see the pattern in al these. 10pts.

- Your agent should also recognize when a person says they are: ok, good and bad within a user's response and respond accordingly: 5pts.

- Your agent must recognize verbs ending in **ed** and use the verb in its natural form (infinitive) in the response. As long as it removes the **ed** part of the verb it will be able to use the verb in its infinitive. (works 85% of the time):20pts

- Your agent must recognize some relationship labels like "mother", "mom", "father", "dad", "brother", "sister", "friend" and respond appropriately: 10pts

- Uses regular expressions for all detections[1]: 15pts.

- Is able to maintain a dialogue no matter what the user input is, except for "bye", which should terminate the dialogue. 20pts.

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[1]The system should ALWAYS try to detect the required keywords

2.1 Examples

These are only examples. Your program should be able to handle more.

- If the user says "I'm sad" or "I'm really saddened by these events" the system should be able to detect that the user is sad and respond accordingly.

- If the user says "In person school ended early in the spring" or "the semester just started", the system should be able to detect the verbs and respond with either "end" or "start" respectively. E.g. "Why did it end?" or "When did it start?"

- If the user says "I'm mostly good today" your system should detect "good" and respond.

- If the user says "I remember when I went there with my brother" the system should detect "brother" and ask something related.

3 SUBMIT

Submit only ONE python file (No ZIP, no TXT) that will run from anywhere. The file must comply with the following convention (THIS IS VERY IMPORTANT)

- The first line should have the name of the homework and optionally a couple of words about it. These should be enclosed in three quotation marks. For example:
  ```
  """ Eliza homework. Relationship advisor """
  ```

- The second line should have your name assigned to the __author__ variable. For example if your name is "John Doe" your next line should be:

  ```
  __author__="John Doe"
  ```

- Optionally, you can specify a file encoding on your first line and then follow the conventions above. You do this by adding the following line as a first line:
  ```
  # # -*- coding: utf-8 -*-
  ```

  A sample hello world file looks like this:

```
#!/usr/bin/env python3
# # -*- coding: utf-8 -*-
""" Hello World program """
__author__="John Doe"

print ("Hello World")
```