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Problem Statement : Develop an elementary chatbot for any suitable customer interaction application.

Importing required libraries

```
import random
```

Dictionary of predefined responses

```
responses = { "greeting": ["Hello!", "Hi!", "Welcome!"], "farewell": ["Goodbye!", "See you later!", "Take care!"], "thanks": ["You're welcome!", "No problem!", "My pleasure!"], "default": ["I'm sorry, I didn't understand.", "Could you please rephrase that?", "I'm still learning. Can you provide more information?"] }
```

Function to generate a response based on user input

```
def generate_response(user_input): user_input = user_input.lower()

    # Check for common keywords in user input
    if "hello" in user_input or "hi" in user_input:
        return random.choice(responses["greeting"])
    elif "goodbye" in user_input or "bye" in user_input:
        return random.choice(responses["farewell"])
    elif "thank" in user_input:
        return random.choice(responses["thanks"])
    else:
        return random.choice(responses["default"])
```

Main interaction loop

```
while True:
```

```
    # Get user input
    user_input = input("User: ")

    # Generate and display bot response
    bot_response = generate_response(user_input)
    print("Bot:", bot_response)
```

In []: