Chatbot powerful

Features
1. User registration and login functionality
2. Basic chatbot responses (e.g., greetings, thanks, help)
3. Conversion techniques (length and weight)
4. Current time and date functionality

Functionality
1. Users can register and login to access the chatbot
2. Chatbot responds to user input based on intents and keywords
3. Users can perform length and weight conversions
4. Chatbot provides current time and date information

Technologies Used
1. Python programming language
2. SHA-256 hashing for password security
3. pytz library for timezone handling

This chatbot provides a basic yet useful set of features, making it a good starting point for further development and improvement.

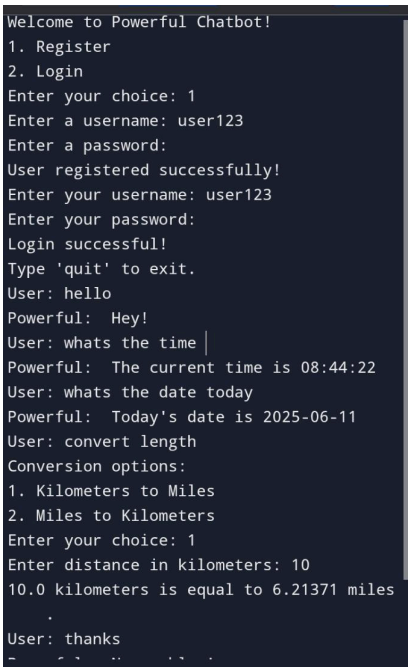
```
import random
import datetime
import pytz
import getpass
import hashlib

# User database
users = {}

def register_user():
    username = input("Enter a username: ")
    password = getpass.getpass("Enter a password: ")
    hashed_password = hashlib.sha256(password.encode()).hexdigest()
    users[username] = hashed_password
    print("User registered successfully!")

def login_user():
    username = input("Enter your username: ")
    password = getpass.getpass("Enter your password: ")
    hashed_password = hashlib.sha256(password.encode()).hexdigest()
    if username in users and users[username] == hashed_password:
        print("Login successful!")
        return username
    else:
        print("Invalid username or password.")
```

```
        return None

def get_current_time():
    timezone = pytz.timezone('Asia/Kolkata')
    current_time = datetime.datetime.now(timezone)
    return current_time.strftime("%H:%M:%S")

def get_current_date():
    timezone = pytz.timezone('Asia/Kolkata')
    current_date = datetime.datetime.now(timezone)
    return current_date.strftime("%Y-%m-%d")

def convert_length():
    print("Conversion options:")
    print("1. Kilometers to Miles")
    print("2. Miles to Kilometers")
    choice = input("Enter your choice: ")
    if choice == "1":
        km = float(input("Enter distance in kilometers: "))
        miles = km * 0.621371
        print(f"{km} kilometers is equal to {miles} miles.")
    elif choice == "2":
        miles = float(input("Enter distance in miles: "))
        km = miles * 1.60934
        print(f"{miles} miles is equal to {km} kilometers.")

def convert_weight():
    print("Conversion options:")
    print("1. Kilograms to Pounds")
    print("2. Pounds to Kilograms")
    choice = input("Enter your choice: ")
    if choice == "1":
        kg = float(input("Enter weight in kilograms: "))
        pounds = kg * 2.20462
        print(f"{kg} kilograms is equal to {pounds} pounds.")
    elif choice == "2":
        pounds = float(input("Enter weight in pounds: "))
        kg = pounds * 0.453592
        print(f"{pounds} pounds is equal to {kg} kilograms.")

intents = {
    "greeting": ["hello", "hi", "hey"],
    "goodbye": ["goodbye", "bye", "see you later"],
    "thanks": ["thanks", "thank you"],
    "help": ["help", "what can you do"],
    "weather": ["weather", "forecast"],
    "time": ["time", "current time"],
    "date": ["date", "today's date"],
```

```
    "length": ["length", "distance"],
    "weight": ["weight", "mass"],
}

responses = {
    "greeting": ["Hello!", "Hi!", "Hey!"],
    "goodbye": ["Goodbye!", "See you later!", "Bye!"],
    "thanks": ["You're welcome!", "No problem!", "Thank you!"],
    "help": ["How can I assist you?", "What do you need help with?", "I'm here to help!"],
    "weather": ["The weather is sunny today!", "It's cloudy outside.", "I don't have real-time
weather updates, but you can check your local forecast."],
}

def get_response(user_input):
    user_input = user_input.lower()
    for intent, keywords in intents.items():
        for keyword in keywords:
            if keyword in user_input:
                if intent == "time":
                    return "The current time is " + get_current_time()
                elif intent == "date":
                    return "Today's date is " + get_current_date()
                elif intent == "length":
                    convert_length()
                    return ""
                elif intent == "weight":
                    convert_weight()
                    return ""
                else:
                    return random.choice(responses[intent])
    return "I didn't understand that. Can you please rephrase?"

def main():
    print("Welcome to Powerful Chatbot!")
    print("1. Register")
    print("2. Login")
    choice = input("Enter your choice: ")
    username = None
    if choice == "1":
        register_user()
        username = login_user()
    elif choice == "2":
        username = login_user()
    if username:
        print("Type 'quit' to exit.")
        while True:
            user_input = input("User: ")
            if user_input.lower() == "quit":
```

```
            break
        response = get_response(user_input)
        if response:
            print("Powerful: ", response)

if __name__ == "__main__":
    main()
```

Output



Outcomes of the Chatbot Project

Achievements
1. Functional Chatbot: A working chatbot with user registration, login, and basic conversation capabilities.
2. Useful Features: Length and weight conversion, current time and date functionality.
3. Secure Password Handling: SHA-256 hashing for password security.

Benefits
1. Improved User Experience: Users can interact with the chatbot and access useful features.
2. Foundation for Future Development: The project provides a solid foundation for adding more features and improving functionality.
3. Practical Application of Technologies: The project demonstrates the use of Python, SHA-256 hashing, and pytz library.