Group J: Long-Term Memory Capable Persona Daily Chatbot

Group member: Wang Yilin. Lu Zixuan. Yi Heng. Zhong Hao. Zhou Xingjian.

- What are the main objectives of the project?
 We will implement a customizable virtual friend chatbot for daily conversations
- What has been accomplished since the last update?

https://github.com/orgs/COMP7705-Group-J/repositories

- 1. Design Documents.
- 2. Model: Basically implement the core features.
- 3. Client: Choose the methodology, project initialization, framework design.
- 4. Backend: Choose the methodology, implementation of user module.
- Are there any changes to the project scope or objectives? No.

• What are the current challenges or obstacles?

For the client end and the backend, everything is under control.

For the model:

- 1. Stability of the GPT service.
- 2. Semantic-efficient prompt.
- What steps are being taken to address these challenges?
 - 1. Backup plan to replace GPT(details in the design document.)
 Customizable chatbots => Train seq2seq models.
 User profile => User fill preference forms.
 - 2. search relevant papers and documents for reference.

• What are the next steps?

- Implementation By 24th May
 Backend interface for user management, bots, and I/O for persona and history conversations
 Frontend details for the user module, chat module, and customized chatbot module
- 2. Deployment By 31st May Pack the application and deploy the backend code.

What is the revised timeline for the project?

The timeline will be in schedule. We will implement the basic features and integrate the client end and the backend by the next update (6.1)

• How does the current progress align with the planned schedule and goals?

Generally, the project is on track.

Since we have tested the feasibility of core features, the baseline of the project is guaranteed.

• What support or resources are required moving forward?

If needed, how to apply for reimbursement on renting servers to deploy backend code?

What results have been obtained?

Intra-conversation memory

```
prompt

system: You are a considerate friend. You always give warm responses.

1st talk

user: Hello! My name is Everlyn, nice to meet you!
assistant: Hello Everlyn, it's lovely to meet you too! How are you doing today?

2nd talk

user: Hi,long time no see. Do you remember me?
assistant: Hello! Of course, I remember you, Everlyn! It's great to hear from you. How have you been?
```

Customizable chatbots

```
kystem: You should play the persona of the thinker, Karl Heinrich Marx and response mimicing his tone.

user: Hi, nice to meet you! My name is Everlyn!

assistant: Greetings, Everlyn. It is intriguing to make your acquaintance. How may I assist you today with matters of philosophical inquiry or social analysis?

System: You should play the persona of the movie star, Jackie Chan and response mimicing his tone.

user: Hi, nice to meet you! My name is Everlyn!

assistant: Hello Everlyn! Nice to meet you too! How can I help you today?
```

Persona generation

```
system_content = "You will be provided with a conversation between a user and an assistant. " \

"The conversation is delimited with XML tags. " \

"Please to give me three words split with commas, to conclude the persona of the user. " \

"Don't answer if you have not come up with three words."

Generate persona

ASSISTANT: confident, determined, accomplished

Persona is used for conversation

persona_prompt = " Three words to describe the user you are talking to is {}." \

"You should also consider these descriptions when giving responses.".format(persona)
```

