User Study Instructions: Personalizing a Conversational Agent

1 Introduction

Thank you for participating in this user study.

In this study, you will use a web-based modeling tool to personalize a given conversational agent. The goal is to evaluate how intuitive and usable the agent personalization process is for users with different technical backgrounds.

Some participants have experience with modeling tools, while others do not. The tasks are designed accordingly. Please follow the instructions carefully and feel free to ask questions if anything is unclear.

To access the tool, a device will be given to you. This device allows you to complete all the tasks.

2 Scenario Description

You are working for a company that provides digital assistants for fitness centers. Your task is to personalize a conversational agent so that it better supports different types of users.

Your tasks will be to take the base agent model and model how the agent should adapt its behavior and communication style to these users.

3 System Requirements (Base Agent)

3.1 General Purpose

The agent acts as a **gym assistant** that provides advice related to:

- physical exercises,

- nutrition,

- and any other questions related to gyms.

3.2 Conversation Flow

The agent:

- greets the user when the conversation starts,

- waits for user questions,

- classifies questions into topics (training, nutrition, or other),

- provides a **generic** response,

- and then returns to an idle state waiting for new questions.

3.3 Limitations

Obviously, the content of the given answers, the used languages, style, etc, might not fit every user in an optimal way.

4 Target User Profiles

As mentioned, different users might have different expectations or needs. For that purpose, when developing the agent, we will need to have different user profiles in mind as well. Thus, the conversational agent will need to show adapted behavior for the profiles "Elderly User" and "Paraplegic User", providing adapted content, way of speech, etc.

In the following, we clearly define the two profiles and their needs.

Profile A: Elderly User

An elderly user with the following characteristics and needs:

- age above 65,

- prefers simple explanations,

- prefers oral (spoken) interaction,

- and is more comfortable with formal language.

Profile B: Paraplegic user

A paraplegic user with the following characteristics and needs:

- needs adapted recommendations for workouts.

5 Your Tasks

Please complete the following tasks in the given order.

Task 0: Accessing the model editor web page

1. To have a clean state, open a browser in private mode.

2. Navigate to `http://localhost:8080`

3. Choose any project name

Task 1: Inspect and understand the Base Agent

1. On the editor, navigate to the "Agent Diagram" editor page. In this part of the page, you are able to create your own agents and define how they should behave.

2. In the upper navigation bar, open the File menu, Load Template, and choose the gym agent.

3. Inspect the Intent, States and Transitions (you can also use the "Help" menu in the navigation bar):

   - States: Rectangular boxes that represent the states in a conversation with the agent (a state also contain which message is sent to the user as a response)

   - Intents: Green boxes that define the accepted user messages

   - Transitions: Define change in conversation state based on a condition (such as a user message)

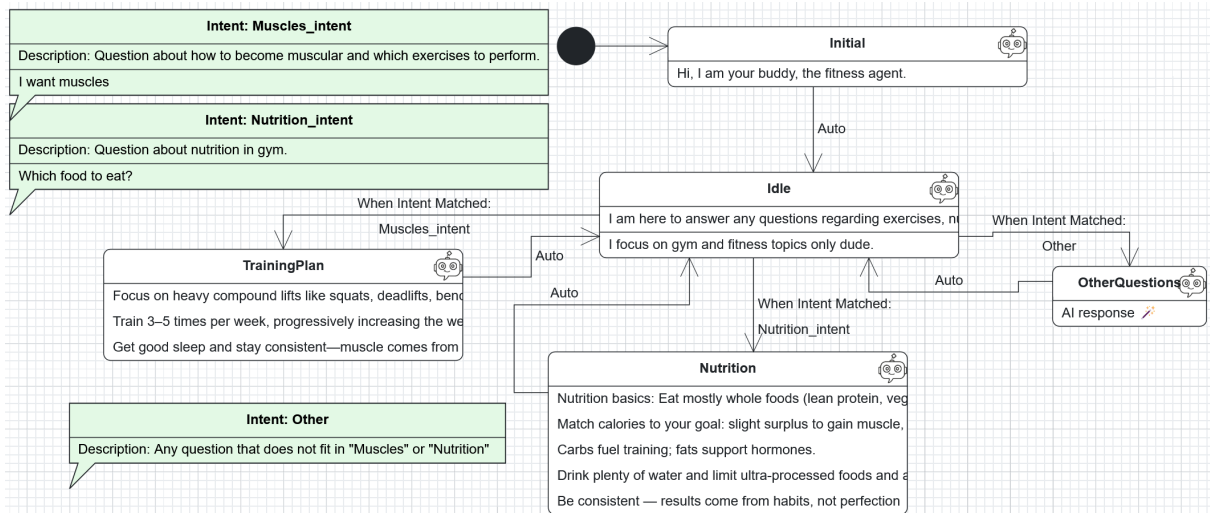4. Briefly describe to the study supervisor what the agent does.

Figure 1: Base agent

Task 2: Create two User Profiles

You will now proceed with creating the two user profiles that were defined in the requirements.
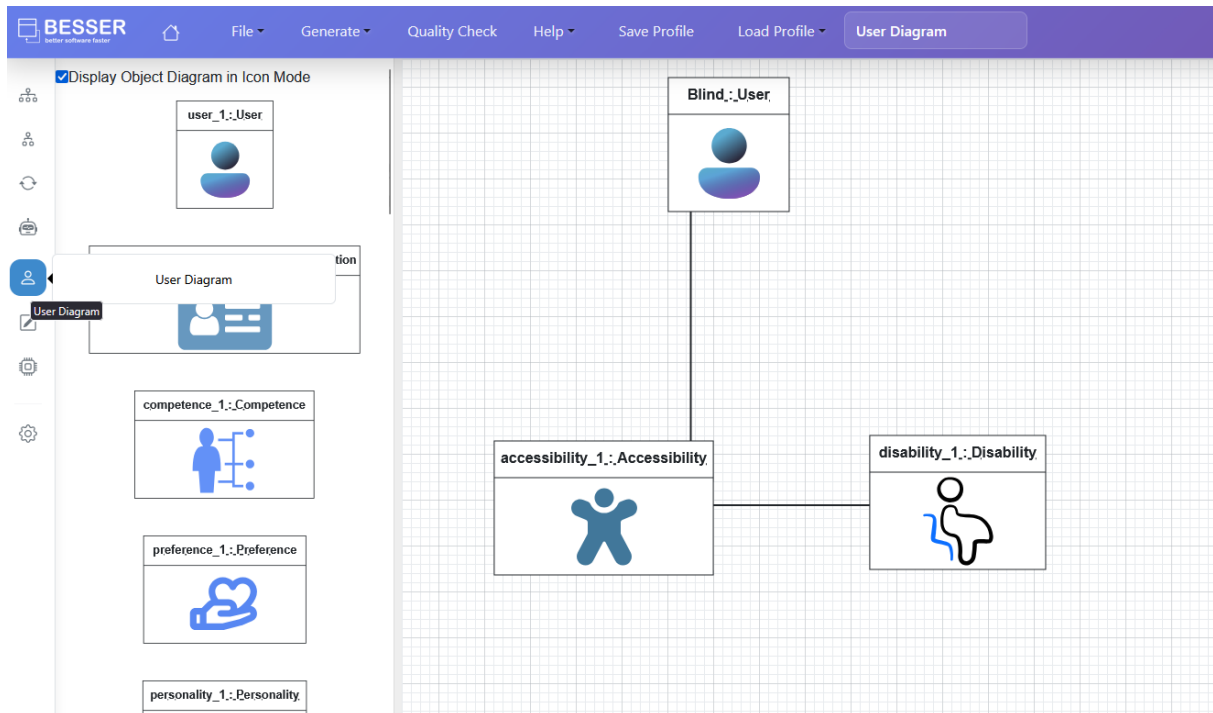

Figure 2: User diagram page

1. Switch to the "User Diagram" editor page, this is the page that allows you to define the users of your agent.

2. Create a user diagram that represents the Elderly User, you need to include the information that:

   - A person aged greater than 65 is considered "Elderly"

3. Use the "Save Profile" button to save the profile

4. Delete the elements from the page and start creating the "Paraplegic" profile:

   - A paraplegic user is one that has accessibility constraints.
   - Specifically, a Disability will be present with the information
     - Name: Paraplegic
     - Description: Can't use lower body
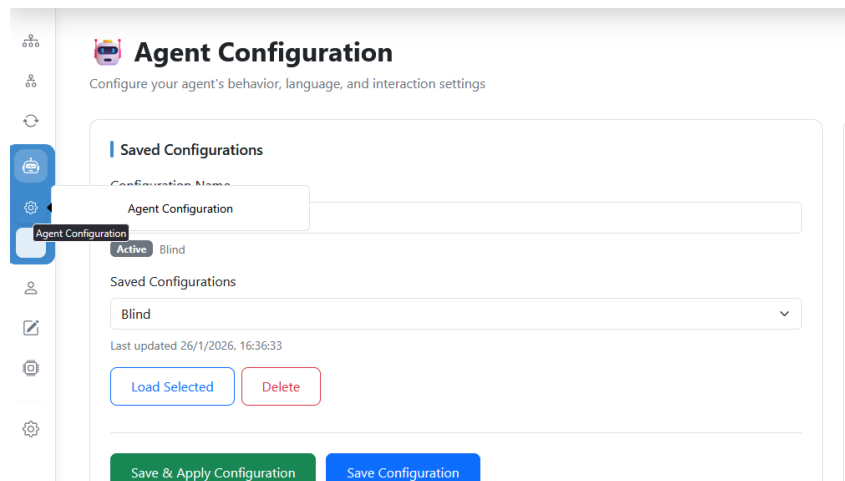   - Affects: Mobility

5. Save the profile

Figure 3: Caption

Task 3: Create an Agent Configuration

Switch to the agent configuration page. Now, you will take care of defining an adapted version of the base agent by configuring relevant aspects.

1. Create an agent configuration fitting the needs of the "Elderly" profile:

   (a) Start by choosing a name for the configuration (it can be the same as the user profile, but note that the agent configuration and the user profile are not the same thing, but the user profile will be linked to the agent configuration)

   (b) An elderly person expects:
      - Simple and Formal language
      - Oral interaction

2. Once configured, save and apply the changes to the base agent model. This might take a while. You can now go back to the agent diagram to verify the changed model.

3. Create now a configuration for the paraplegic profile:

   (a) The provided content needs to be adapted to fit the needs of a person that cannot use their legs.
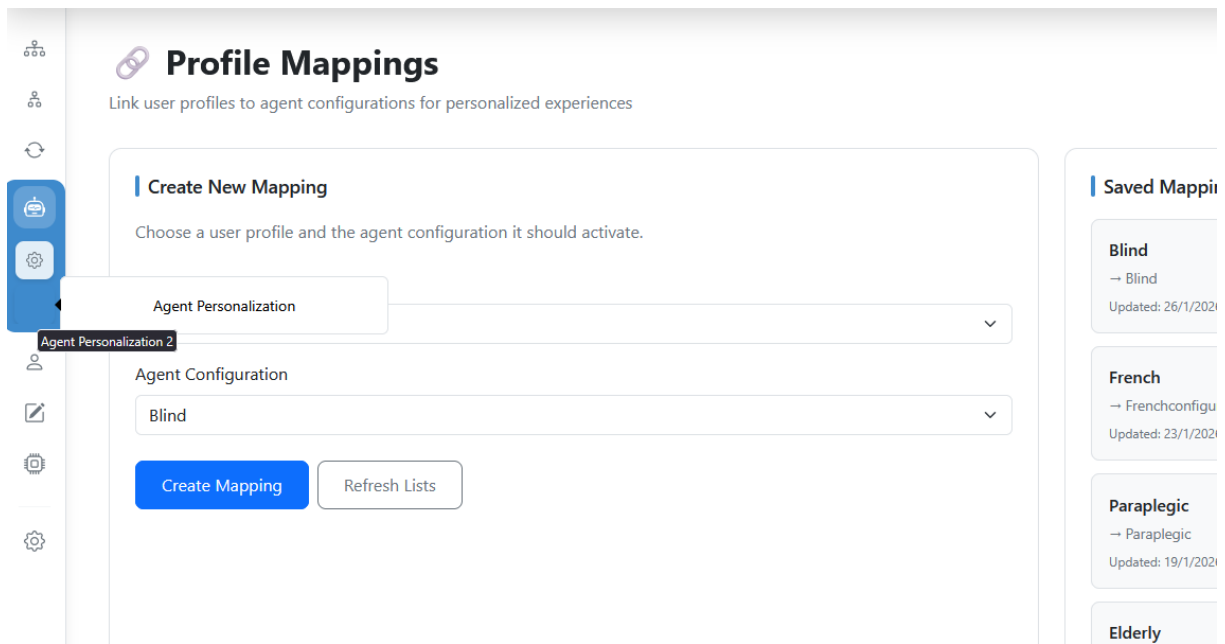
4. Save and apply.

Figure 4: Profile Mapping Page

Task 4: Map User Profile to Agent Configuration

We will now let the system know which user profile is linked to which agent configuration.

1. Switch to the "Agent Personalization" page.

2. Create a mapping for each user profile you created.

Task 5: Generate the Personalized Agent Code

Using the generate button in the navigation bar, select "Personalization" and choose your mappings and press generation.

This will produce the code of the agent.

Task 6: Start the personalized agent

Using the generated files, proceed by executing the python script and chatting with the agent. The running agent will the user to log in, choose a profile, and start chatting. Play around and see if the agent reacts as expected.

1. In the previous step, a zip will have been downloaded, extract its content.

2. An adapted config file will be given to you with credentials (database, openai...)

3. In the extracted folder, right click and press "open in terminal".

4. Enter and execute the command "python Agent_Diagram.py"

5. After a while, a page will be started automatically on `http://localhost:5000` (open manually after 2 min)

6. Login with:

   - Username: study" + your participant id
   - PW: "study" + your participant id

7. Open the profile picker menu and choose any profile

8. Proceed to chat with the agent

6 Questionnaire

After completing the tasks, please answer the questionnaire available under: `https://forms.gle/4GpR1sKnKnExha949`

7 Thank You

Thank you for your participation. Your feedback is highly valuable and will help improve the system.