Hussein Bourgi

Maids.cc

Explanation ChatbotWorkflow

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# 1 – Why These Attributes?

I chose the following attributes because they directly address the requirements and are easy to manage without adding extra, unnecessary data:

1. **isRetruningUser**(Boolean):

* Needed to distinguish between a new user (who must provide full profile info) and a returning user (who can skip some steps).

1. **userName**(String):

* Required to store the user’s name.

1. **userAge**(Intger):

* Needed to decide if the user needs guardian consent (under 18).

1. **guardianConsent**(Boolean):

* Only set if the user is under 18. If false for a minor, we deactivate their profile.

1. **active** (Boolean):

* Used to deactivate a user’s profile if they’re underage without consent.

1. **livesAlone, isVegetarian, isReligious** (Booleans):

* These three lifestyle questions are required and can be stored either separately or encoded in a single attribute.

1. **newsletterSubscription** (Boolean):

* Indicates whether the user wants to subscribe.

1. **userLanguage** (String):

* Stores the user’s language preference. Defaults to English if invalid.

1. **interests** (String):

* Tracks whether the user is interested in “Product A,” “Product B,” or “Service X.”

1. **shippingAddress, shippingSpeed** (Strings):

* Needed if the user chooses Product A or B.

1. **serviceDate** (String) (and optionally **serviceTimeRange** if needed):

* Needed if the user chooses Service X.

1. **premiumSupportEnabled** (Boolean):

* Indicates if premium support is activated. If the user returns and had it before, we can skip or confirm again.

1. **promoCode** (String) and **promoCodeValid** (Boolean):

* Promo code must match the format (3 uppercase letters, 4 digits, 2 special characters, 3 lowercase letters).
* If invalid, prompt again or skip.

1. **confirmation** (Boolean):

* Set to true when the user confirms all the info at the end.

I excluded attributes like debugMode, discountAmount, mysteryFlag, etc., because they do not directly satisfy any stated requirement. We also don’t need questionCounter or configurationMode for a straightforward flow.

# 2 – How the Flow Works

1. **Greeting & Return Check**

* The chatbot starts by greeting the user and checking isReturningUser.
* If isReturningUser is false, we treat them as brand-new.
* If isReturningUser is true, we skip questions the user has already answered.

1. **Collect Basic User Info**

* For new users, we ask for userName and userAge.
* If userAge < 18, we ask if a guardian consents (guardianConsent).
  + If no consent, set active = false and end.
  + Otherwise, proceed.

1. **Lifestyle Questions**

* We ask the user three things:

1. Do you live alone? (livesAlone)
2. Are you vegetarian? (isVegetarian)
3. Are you religious? (isReligious)

* If the user is returning and these are already known, we skip them.

1. **Newsletter Subscription**

* “Would you like to subscribe to our newsletter?” → newsletterSubscription = true/false.

1. **Language Preference**

* Offer the user three options: English, Spanish, or French.
* If the user’s choice is invalid or blank, default to English.

1. **User Interest**

* Ask: “Are you interested in Product A, Product B, or Service X?” → interests.
* If the user chooses Product A or B, we prompt for shippingAddress and shippingSpeed.
* If the user chooses Service X, we ask for serviceDate (and optionally serviceTimeRange).

1. **Advanced Feature Check** (Premium Support):

* “Do you want premium support?” → premiumSupportEnabled.
* If the user has it set from a previous session (isReturningUser = true and premiumSupportEnabled = true), we can mention that they had it before and ask if they still want it.

1. **Promo Code**

* “Do you have a promo code?”
* If yes, prompt the user to enter it (promoCode). Validate using a regex or manual checks for the required format (3 uppercase letters, 4 digits, 2 special chars, 3 lowercase letters).
* If invalid, let them re-enter or skip.
* If valid, we set promoCodeValid = true (optional attribute).

1. **Summary & Confirmation**

* Summarize everything we’ve collected—name, age, guardian consent (if applicable), lifestyle answers, newsletter subscription, language preference, product interest (and shipping or service date details), premium support, and promo code.
* Ask the user: “Do you confirm all these details?” → If they confirm, set confirmation = true and finish.

1. **Error Handling**

* If the user enters the wrong data type (e.g., text for age), prompt them again.
* If the user enters an invalid promo code format, re-ask or allow skip.
* If a returning user changes some data, we overwrite the old info.

# 3 – Handling Returning Users

* Skip Already-Filled Steps: If isReturningUser is true, we check any known attributes before asking questions again.
  + For example, if userAge is already stored and the user is over 18, we don’t need to ask about age or guardian consent again.
  + If livesAlone, isVegetarian, and isReligious were answered on a previous session, we skip those.
* Reconfirm Premium Support: If they had it enabled, we can mention: “Looks like you had premium support previously. Keep it on?” and proceed based on their response.